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Dr. Russel Clark Paris

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1 Dislocations are attended with an involuntary Spasmodic
contraction of the muscles about the injured part —

2 but if suffered to remain long a considerable difficulty
will always attend the reduction, and this is owing
to contraction of the muscles, the contraction of
the capsular ligament about the head of the bone
and the improper connection of the cellular mem=
brane —

Lecture 15th

Dislocations.

When any bone forming a joint, is forced out of its natural situation, it is said to be luxated. It occasions the patient a goodeal of pain, loss of motion and causes a considerable alteration in the shape of the limb. 1st In general, if the Surgeon is called in soon after the accident, it is easily reduced. 2d The greatest difficulty we have to contend with, is the contraction of the muscles. The ruptured capsular ligament does not make much rifistance, except in certain circumstances, The patient should be restricted to low diet, a warm bath, and mechanical force; and when there is a difficulty of reduction, the patient should be bled, to weaken the contractions of the muscles, where by we will be able to over come them more easily. In different cases I have found, where the usual methods fail, that the best method is to be bled ad diliquium animi. This completely distroys all muscular force, and experience has proved it to be the best method, This mode of treatment was first practiced in this country by myself - When the patient refuses this, I have tried the nouseating effect of an emetic, just before

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vomiting, or an injection of an injection of tobacco or toba=
=cco smoke, has proved succesful when other things have
failed. Boyer says that intoxication produces the same=
effect; and I would suppose it might answer the pur=
=pose verywell. The muscular contraction continues to
resist the reduction for a bout three weeks; after which
the muscles become accomodated to their situation;
The bone begins to form a Apision, which, with the
contraction of the capsule of the joint, causes the diff=
=iculty of replacement; so that it is most necessary to
bleed ad diliquiem animi in cases when luxation
has existed more than a month. When we apply
force to the reductions of luxations, we should be
careful to apply it only to the dislocated joint. The
limb should be placed in a relaxed state.
I now speak of particular luxations, and first of
the lower jaw.

Luxations of the Lower Jaw.

When theese luxations occur, they take place upward
and forwards, so that the condyles rest on the tubercle
of the temporal bone, sometimes both condyles are
brot forward, and sometimes only one: When one
only is displaced, the jaw is turned only to one

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side; When both are luxated, the mouth stands wide open, in spite of the efforts of the patient to the contra=ry, and the patient cannot swallow. The same effect takes place when only one condyle is displaced. If you apply your finger at the place of articulation, the cavity may be felt.

Luxations of the jaw occur from yawning, or opening the mouth too wide, sometimes causing a good deal of pain. Some years since, a woman in the Market falling into a great passion, and opening her mouth pretty wide the better to vociferate, luxated both condyles, and to her great mortification, could not close her mouth again; and was not. two or three squares in this predicament, to me, to have them replaced, they were easily reduced.

Treatment. In proceeding to reduce the lower jaw we must take the precaution to wrap up our thumbs very well, to prevent their being injured between the teeth, by the convulsive actions of the muscles, the instant the reduction takes place. They must be placed as far back on the molar teeth as possible: the fingers are to be placed under the chin, then push the

jaw downwards and backwards at the same time squeezing the fingers upwards. If the fingers do not press the jaw downwards, the reduction will not be so easily if atall, accomplished. I have seen great force applied directly backwards without any effect. some have advised to give a knock under the chin; this may sometimes succeed, but it is apt to break off the neck of the condyles.

No bandages are necessary after the reduction.

Luxation of the Clavicle.

This may take place either at the sternum, or at the acromion process. I have never seen it occur at the sternum, tho I have no doubt but that it may readily take place there on account of the superficial articulation, if a considerable force be applied so as to push the shoulder forward and inward. Where it happens, the patient is unable to raise his arm. Luxations at the scapular End I have seen. — The may be occasioned by the patient being thrown on the shoulder, from a horse, or otherwise, so as to press it, downwards. In both cases the treatment is the same as that for fractured clavicle. When the scapular end is dislocated, we must continue

the bandages for a considerable time, or else the shoulder will sink down lower than natural, and form a tumer on the top of the shoulder.

Luxation of the Of Humeri.

This takes place at the shoulder joint, and occurs oftner than any other bone; owcing to its great latte=itude of motion in all directions, allowed by its glensid cavity. It is commonly luxated downwards towards the axilla; and is mostly occasioned by a fall on the shoulder: tho I have seen it luxated fore=ward and inward between the pectoral muscles and clavicle; but mostly inside of the coravid..... process. It is said to have been luxated backward, this I have never seen. When it is luxated inw=ard and downwards, a depression can be felt above the humerus, between it and the acromion process. If you put your finger in the axilla, the round head of the humerus may be felt. The patient cannot put his elbow to his side; he cannot rotate his arm, nor raise the fore arm to his head, which is mostly some what fixed. He commonly has an inclination to rest his arm on something to sup=port it. I have already shown how to discrimi=

nate

between luxations and fractures of the humerus, which you will do well to remember.

Treatment.—If the surgeon is called soon, there is but little difficulty in replacing the bone, because the muscles do not begin to exert themselves immediately. I have accomplished the reduction by placeing one hand on the acromion process, to make the counter extension, and pulling the arm with the other to make the extension. to apply greater force, it has been advised to fix apply a couple of trocles on the arm just above the elbow, by means of a roller, then turn the upper ends of them down. But Mr. Hays method, I think pre=ferable - When the arm is drawn out by an as=istant, and counter extension made by a nother, place your hand under axilla, and push upwards, at the same time suddenly push the elbow in tow=ards the side. after you have tried this method, if with no effect, bleed ad deliquium animi. If this patient be strong, this cannot do any hurt, and if weak there will be no necessity for it. This compleatly removes muscular action, and the limb can be reduced with ease

About two years since a man was admitted into the Pensylvania Hospital with a dislocated humerus; the accident had happened three or four weeks pre=vious, and the parts were so much swelled, that he had to remain about ten days before we could ascertain whether it was luxated or not, after trying all usual methods to no effect, I bled him till he fell on the floor in a fainting fit, when the bone was reduced with great ease. I have since repeated it with the same good success. after a limb has been luxated for more than three or four weeks, the muscles become accommodated to the situation, and begin to form adhesions. The best way to accomplish reduction after adhesions have taken place, is by means of a compound tackle. Take two round towels and secure them at the middle, just above the elbow by means of a roller; turn the upper halves down to the elbow, and thro' the ends of them pass the rope of the tac=kle to make the extension; the other rope, to secure the tackle, is to be fastned to a firm place to make the counter extention, a long staap about an inch wide, stuffed with horse hair or cotton

must be applied against the end of the acromion pro=
=cess, and the ends brot round the body in a contrary
direction, and made fast to some fixed place. To
prevent the strap slipping off and excoriating the
shoulder, a strip of roller may be ~~applied~~ placed
round it by which it may be held in its place.
To secure the thorax, pass a wide strap or belt round
the body, securing it with a buckle or otherwise; to
this have a rope which may be held by an apistant,
to keep the body in its place, as the patient is apt
to get.....

Thus fixed, draw the rope to make the extension,
and have a care that the counter extension be ma=
=de against the acromion process, else the arm
may be torne from the chest. It is therefore of
great service to make the counter extension
on the acromion process. In making the
extension the arm should be rotated to sepparate
the adhesion, which have formed. The surgeon
may have a towel under ~~and~~ is arm and over
his shoulder to draw the arm up, or he may
put his arm in the exilla, and push the pati=
=ents elbow downwards with the other hand,

using the humerus as a lever. The bone has been lodged in the axilla for 6 & for 9 - weeks, and been replaced; and indeed a much longer time, for it is possible to displace a bone surrou=nded by a fine capsular ligament from a natural to an unnatural situation, and it is as possible to bring it from an unnatural, to a natural one. But when the bone cannot be reduced, we are not to dispair altogether, as a great many useful motion, may be performed. I know a cabinet maker - whoes arm was dislocated, and yet he was able to follow his trade; and the only motion he could not perform was drawing his arm directly upwards. I shall not pre=tend to discribe all the machines that have been invented for reducing luxations, but only a few of them.

It has been supposed that a staple fixed in the floor over head, and the patient suspen=ded from it by his arm would be productive of good effects: But it would endanger taring the arm from the chest, as no counter ex=tension could be made against the scapula

acromion. a nother method is to grasp the arm for the purpose of making extension) the patient laying down) then place the foot in the exilla to make the counter extension) and when you make the extension) pass the arm towards the side, and your foot will thrust the head of the bone into its place. I saw Mr. Hunter do this very successfully. some advise hanging with the arm over a ladder. But none of theese methods are very good.

Lecture 16th.

Luxations of the Fore Arm

The fore arm is luxated upwards and backwards forming a protuberance behind the arm, and kept fixed, tho sometimes it is luxated lateraully. The coverings of the part are so thin that the surgeon can readily ascertain the nature of the case. The patient cannot flex or extend the arm; the coronoid proces of the ulna occupies the cavity naturally filled by the olurenon, and is

what prevents the Reduction.

Treatment. In order to reduce it; an assistant should take hold first above the elbow, and another below at the wrist, to make the necessary extension. The sure rule given is to take hold first below the elbow, and pull at the same time directly backwards to draw the coronoid process from off the humerus: when the arm is forcibly enough extended by the assistant, bend it towards the body; which will in most instances be sufficient to complete the reduction. A bandage may then be passed round to secure it.

Luxation of the Wrist.

This takes place forward and backwards; it can be readily reduced by making the proper extension, and pressing the bones at the same time into their places.

Luxations of the Fingers.

These also occur forward and backwards; extension and binding will in common reduce them.

Luxations of the Thumb.

When the Thumb is luxated at the second phalanx it is the most difficult of reduction of any bone in the body. Extension has been applied so as to tear off the first phalanx and yet the bone not reduced.

Luxation of the Of Femoris.

The was formerly that, by some not to occur often on account of the amazing strength of the capsular ligament which was computed to be sufficient to bear 1000 ℔ and from this concluded luxations would not often happen. I have, however, seen more cases of luxations of the thigh at the hip, then ever I saw fractures of the neck; I believe about 9 luxations, and not more than 3 fractures. It is generally luxated so that the head of the bone passes backwards, lodging in the dorsum ilei; and next to this downwards and forwards into the foramen ovale; and may be luxated immediately when it is luxated backwards and upwards, the limb is commonly about 1½ inches shorter than usual.

If a bruise has taken place about the pelvis, it may influence the length of the limb, by caus=
=ing the pelvis to be drawn to one side. In order to ascertain if the pelvis be streight, place a string or strip from one superior anterior spi=
=nous process of the ilium to the other; if it cut the body at right angles, the pelvis is straight, then measure from the anterior process to the knee, to ascertain the length of the limb. It is necessary to know if the pelvis be streight, be=
=fore we can ascertain the existance of a luxation. If joint be bruised, the insured limb will be the longest, when the luxation is upwards and backwards, the toes will be turned inwards, and turning them outwards causes great pain. The patient cannot move the limb, this, when all other syentoms are wanting, is enough to as=
=certain the existance of a luxation upwards and bac=
=kwards. It is by no means difficult in ordinary cases to distinguish between luxation and fracture of the head of the thigh bone. Of this I speak when treating of fractures. — When the bone is luxated, no crepitus is felt; and when

the neck of the bone is fractured, the foot always turns to the outside, and is easily turned inwards; but if it be luxated upwards and backwards, the foot can=not be turned outwards at all, or without causing great pain. When it is luxated downwards and forwards, it is lengthened mostly about an inch, and the foot is turned outwards, and turning and turning it inwards causes great pain. The distance between the trochanter major, and the superior anterior - spinous process, is greater. When the head of the bone is luxated forwards and upwards on the Os pubis, it is a little shorter; this is a very rare occurrence; only one case of it is mentioned by Disfault, in which case the foot turned outwards. The same kind of treat=ment, nearly, is required in all cases; That is, extension and counter extension. As the brim of the acetabutum is large, an apparatus to dis=lodge the head of the bone, and pull it stra=ight from the body, making the extension and counter extension on a right line with the body, is required. On these general principles, lux=ations of the thigh bone are to be treated.

In luxations of the head of the thigh bone, it is ne=
=cessary to use a considerable degree of force for its
reduction; and the best method is by compound pul=
=ley, when they can be had: But it can be rea=
=dily be effected by the assistance of men; and our
advantage is, That they can desist instantly requ=
=ired; but in obstinate cases where much force
is necessary, the pullies are generally used.—
I shall next give you the method of treatment.
Where it is luxated upwards and backwards, the
patient is to be laid on his sound side, and the
limb bended at the hip and knee, to relax the
muscles; a stoap, for the purpose of making
counter extension, is to be passed under the pe=
=rineum between the scrotum and injured thigh
having some soft substances between it and the
perineum, and fastened a fixed point: next two
strong round towels on each side just above the
Knee, to be secured by a roller, to make exten=
=sion; When this cannot be fixed above in fat
persons, it may be put just below the Knee;
but it is best to secure the extending power to
the luxated bones a pulley fixed to the towels

can make extension with great force: during the extension, the surgeon must rotate the bone to de=tach its head; if this is found insufficient, bleed ad diliquium. When the head is luxated into the foramon ovale, or forward on the ospubis, make the usual extension and counter extension, in a line with the limb; and at the same time make extension and counter extension, at right angles with the thigh bone, outwards, which is abso=lutely necessary. To effect this, the patient lying on his back on a table, pass a strong towel round between the thighs, close to the perineum; an assistant is then to get on the table, and take and take the towel over his shoulders and pull upwards to make the extension, which his knee is placed on the crista of the ileum, to make the counter extension; mean while the surgeon ro=tates the limb. If this is found insufficient to draw the head of the bone out of its situation, fix a pulley to the towel, and pass a strong bandage round the crista, and fasten to a staple for making the counter extension. This method succeeded last winter. When

the head of the bone is on the pubies, the surgeon should bend the leg at the knee and rotate it by placeing one hand on the knee, and grasping with the other below it, whilst the extension is making. Default thought the contraction of the capsular legament prevented reduction: but I believe that the almost only cause of resistance in reducing luxations, is the contractions of the muscles: for the same orifice in the cap=sular ligament, which suffered the head of the bone to escape out of it, would also be large enough to let it return. if the bone is not reduced, it will form a new socket for itself. a proof. that the head of the femur will form a socket out of the ace=tabulum, is instanced by a Girl, who fell and hurt her hip very much, so that she kept her bed for several weeks. When the swelling that supervented, had subsided, her hip was found to be luxated: somtime after she began to go a bout a gain, she fell and hurt the other hip; when she had got over this fall, she found that her legs were now, contrary to what they had been, nearly of a length, and often she had acquired more-

strength, she was able to walk on crütches, and gai=
=ned strength in her hips every day. She was shortly
after taken sick and died. The hips were dissected, and
found both luxated; new acetabula were formed on
both sides, which, which no doubt would, have done
very well had she lived.

I shall next speak of Luxation of the Knee joint
Here occur very rarely; I never saw but two cases;
and in both these the tibia was received on the
external condyle. This is easily reduced, but
not easily kept in its place When done, the leg is
much distorted. Desaults long splint answers
very well for keeping the bones in their proper si=
=tuation. After they are reduced, the patient should
keep his limb in a state of perfect quietude, for 8.
or 10 weeks, untill the ruptured ligaments are
perfectly healed. The patient must be kept in
bed. I once saw a luxation of the ankle, Tho they
rarely occur. A lady with high heel shoes on,
was coming down stairs and stepped two far,
so that the heel of her shoe only rested on the
step; the weight of her body bending the heel
back, pressed the tibia forward of the astragulus,

on to the instep, in consequence of which the toes were kept extended, the malolus was likewise bro=ken. I was not called till swelling and inflam=mation had taken place, and could not ascertain exactly, what was the matter. she was bled, and at the end of about three days, when the swelli=ng had subsided, I was able to ascertain the natur of it. It was reduced by an assistant holding down the tibia, while I caught hold of the heel and toes & pulled the foot forwards. a splint was applied for the fractured malleolus.

For the treatment of sprains, I refer you to Boyer. The joint should be immersed in cold wa=ter for some time; or water poured over it; after which cloths wet with vinegar should be appli=ed, and continued for some days; and kept at perfect rest during the whole: for if the patient walk, he is sure to bring on inflammation, which upon resting will subside, and return again upon motion, if used too soon; and if the patient continues to use it — suppuration and hectic fever may be the consequence; this in our case of a lady actually occured: caries of the end of

the bone takes place, and amputation is necessary for the recovery the patient.

Lecture 17th.

Of Injuries of the Head.

Injuries of the head may be divided into external as they effect the scalp and integaments, and in=ternal, as they effect the brain and its membrances, the are of several kinds. 1st. Contusions, 2d. Pu=nctures. 3d. Inflammation of the brain and its me=mbranes, 4th. Concussions. I shall begin first with the scalp. The injuries done to the scalp are several and first of Contusions.

When contusions of the scalp occur, in which there is a rupture of the vessels, they pour out their fluids forming a tumor, and swelling which has a pappy feel: a round this tumor there are hard edges, which impart to the fin=gers a sensation of broken bone, often- mis=leading the inexperienced, who are not aware

of it, and inducing them to make inscisions thro' the scalp when to their surprise they find the bone sound, and thus produce a disagreeable sup=
=purating sore, and perhaps exfoliation of the bone. The best treatment, is the application of vinegar in compresses to the injured part. In a few days, the extravarated blood will be absorbed.

The scalp is sometimes lacerated and torn loose from the bone for some extent, and under su=
=ch circumstances it has been advised to cut off the loose portion; but this should never be done. The parts should be well cleaned from dirt &c. and the flap placed in its natural situation, and kept so by adhesive plasters or stiches. It has been objected to this that abscesies would form beneath, and the loose part have to be removed at length.

If abscesses do form they must be opened, as in other parts; & it is better to run the risk of a few small abscesses, than to produce so great a de=
=formety, and perhaps cause an exfoliation of the bone. 2nd In Punctured wounds of the Scalp, In these cases, the patient is often afflicted

with great pain, especially if the apponeurosis be wounded. If the inflammation extend to the pe=
=rieranium, it becomes necessary to dilate the wo=
=und, the patient becoming feverish. I have seen inflammations of it occur in every kind of wounds, except insused wounds, It has been supposed that it occationed - inflammation of the brain, and therefore trapaning has been advised: but I believe it does not occur when the injurey is only on the outside; for it is hardly probable that two sides of a cavity will become so violently inflamed at the same time. For instance, in violent inflammation of the vil=
=lous coat of the stomach, the foretoneal coat is hardly ever inflamed, and viceversa peritonal inflammation, the external parts are seldom effected &c. Besides these affections there is a=
=nother effect of injuries to the scalp; which is severe fixed pain in the part stricken. It takes place from the time of the accident. I have seen contusions of the scalp which created great pain in the part, and cont=
=inued for a long time. The first case I ever

saw, was that of a lady who had received an in=
=jurey on the scalp upon the parietal bone, from
the falling of a sash, which — gave her great
pain. The inflammation subsided in a few
days, but the pain continued. She had used ev=
=acuants without any benefit. upon first exa=
=mining the case I thot the bone fractured,
but upon further examination it was found
to be only bruised. I proposed an inscission, wh=
=ich was made thro' the scalp: The pain im=
=mediately ceased and never after returned.
Another instance, was of a young man, who
had received an injurey of the scalp, upon
the parietal bone, on one side, and at the
same time received a blow upon the other,
great pain followed it which still increased,
and by the second day the pain was become
so great, that his friends had to hold his
head, to prevent the ordenary sounds of the
house, made by walking across the floor, ex=
=citing convulsions. Evacuating remedies
were used, but with no effect. An inscis=
=sion was made thro' the scalp in the con=

tised

wound, by which he was much relieved, but the pain returned in half an hour, on the oth=
=er side. The bruise on the other side was laid open in the same way, and the pain cured & never returned again.

some cases of this kind have resisted every treat=
=ment, & subsided only onps retiring into the country, and remaining there for some time.

Next of the brain and its membranes.

And first of compression. When injuries of the head occasion compression of the brain - Coma, sickness of the stomach, vomiting, Involuntary discharge of urine and faeces. The causes that produce this are of two kinds, 1st. indentations of the scull, and 2nd. the principal causes of compressions of the brain, are effusions of blood or other fluids coll=
=ected inside of the cranium, either between the membranes and scull, in the substance of the brain itself, or in the ventricles; and this may happen - without a fracture of the cranium, or with it.

Fractures of the cranium occur sometimes with=
=out these symtoms even when the bone is in=
=dented. I have seen slight depressions of

the cranium, without any of these usual symtoms of compressed brain. an instance of this kind was in a fracture of the forehead, so that the little finger might lay in the indentation, and yet no sy=
=mtoms of the injurey of the brain existed, but in all the cases of this kind that I have seen, the injury was received just over the frontal sinuses. When no sijmptoms of compused brain occur, the scalp should not be elivided, But when symptoms of compression do occur, make an inscission thro the scalp: so that you can examine the bone, if the inscission be not already sufficient; and relieve the compression with the trephine. It has been customary to seperate a portion of the scalp. I myself once cut off about one forth of it; but this is always cruel, since it is of no use. A simple inscission, or crucial one, is always sufficient to examine the state of the bone. If a fracture be found to exist, it is safest to make a perforation thro the bone to relieve the dura=
=mater. In compressions of the brain arising from affusions from the vessels, the symptoms of compression do not allways occur, immedi=
=ately,

because the effusion does not always accumulate
soon enough to produce it immediately, I was once
called to visit a boy who had received a hit on the
forehead pom a stone thrown a cross the street.
The bone was fractured, and a little depressed; the
pain was not so great at first, but that he went
home and gave a history of the accident., but be-
=fore I arrived, he was severely attacked, and fell
from the chair, supposed to be dead. his pults fell
and his extremities were cold; the opperation of
of trepaning was performed, and blood exuded from
beneath the scull, which accasioned the ~~dep~~
compression, and he was immediately relieved.—
3rd. The next injuries I shall mention, are su-
=ch as produce inflammation of the brain, or of
its membranes.— The inflammation does not
come on for sometime after the accident.
Symtoms: The patient cannot sleep, has con-
=stant watchfulness, pulse hard and tense, the
face becomes turged and flushed, a sense of tig-
=htness, as if a cord was tied round the brain, th-
=irst, suffusion of the Eyes, delirium nausea
vomiting &c.— If these symtoms continue

for some days without any abatement, or rather increase instead of decrease & if tho are occationed by contusions of the scalp, a few inscision should be made down to the bone, to examine the state of the parts: if the inflammation within the scull, have proceeded on to suppuration, the perceranium will be found separated, spontainously, from the scull, and discharge very commonly a portion of thin ichorous matter; the bone will have an unhealthly appearance, generally of a whitish-milky colour, but sometimes of a purple tinge: under such circumstances, the trépline should be immediately applied. Inflammation of the brain; may occur from simple contusions of the scalp, or from concussions of the brain.—
For contusions of the scalp, apply bread & milk-poultice, and if an abscess from underneath, treat it as in any other place. In all cases, low diet should be strickly adhered to, to prevent inflammation of the brain, or of any of its me-=mbranes; purging should be used, and copious venesection. Blisters should be all over the head applied, and kept running. Inflamma-

=tion

of the duramater, where we have reason to believe there is a formation of matter on its surface, between it and the scull, an opening should be made thro' the bone for its discharge. sometimes both the dura and pia mater are injured: Where it is the last, a proforation of the scull, is of no use, as the matter collected below the duramater, cannot be evacuated, When there is reason to suppose that inflammation of the dura and pia mater have taken place from contused wounds, the patient should be trepaned at the place of injury, which by removing the tention of the inflamed membranes, may prevent suppuration &c. and a train of disagreable syntoms.

When the degree of violence has been sufficient to fracture the scull, we sometimes find the edges of the fracture are close; a question has then arison whether the patient, should be immediately trepaned or not. Mr. Potts. who took great pains to inform himself of the nature of injeuires of the head, is of opinion that it had better be done immediately.

and it is certainly safest; because there is a great risk of inflammation and suppuration taking place. The reason why it should be done is, that the fracture is compound, or else it would not be ascertained that the edges of the fracture were in contact. This makes it necessary, but I have seen when the inflammation was not great, suppuration of the dura mater avoided by the antiphlogistic regimen. In simple fractures of the cranium, when the brain is not compressed the trepine should not be applied immediately.

Concussions

This sometimes produces the symtoms of compression, & in others cases not; It may occur from jumping from a hieght on a hard floor, from falls, or from violence done to the head. In wounds of the scalp, where the patient becomes immediately senseless or delirious, begining a sentence and breaking it off in the middle suddenly, it is supposed that the brain has been shaken. I doubt, however, whether some of the vessels in the inside of the cranium

are not ruptured. Upon some accasions, I have, on examination, when the brain was supposed to be con=cussed, found the vessels ruptured; and on others, not so. In these cases, no benefit is derived from trepaning. General remedies should be used. The antiphlogestic plan. Stimulating remedies should be avoided. ~~Evacuation~~ nausea, pleding, low diet blisters, and if these fail, mercury sufficient to excite sali=vation. — As a general remidy, rule, I beleive it would be right, in contusions of the head, in every instance, to pour cold water over the head for some time, by which means the effusion from the vessels, will be in a great degree preven=ted. — I would recommend for your perusal, Pott on the ~~infuries~~ injuries of the head. —

I have now only to shew you the method of op=perating with the trephine. In the first place remove the hair; by which we will be enna=bled to examine the injury of the scalp; next make an incision thro' the scalp, for which purpose a scalpel, the handle of which is cap=ped with Iron; in order to clear the bone will be found fittest. —

In taying bare the scalp, take notice whether it be fractured, or whether a groove made by some of the vessels do not appear; if it be the latter, the edges will be smooth, if the former, they will be sharp. If the bone be depressed, it must be elevated, to do this, it is necessary to remove a portion of the sound part too, The center point of the trephine should be placed in a sound part or else it will tend to depress it the more. Whilst the purforation is making, great care should be had to move the centerpin as you still perforate deeper, so that it does not perforate penetrate the dura mater. It is likewise to be carefully observed, whilst operating over the lateral sinues. When you suppose you are nearly thro, the bone, the hole should be well cleared out to examine, if in any place, it is nearly thro; for this purpose, a common tooth pick answers verry well: you may likewise have recourse to your elevator, this should be often towards the last, and try if you can raise the enclosed piece. If you find it nearly thro, on one side, lean your instrument on the other. It is advisable to force the piece out with the

elevator before it is quite out thro'; as there will then be less danger of injuring duramater; and any spicular of remaining bone may be broken off with the elevator— A saw of this shape (fig) may be used often the — trephine where long depressions of bone require it, because, to use the trephine adjoining, would remove too much of the sound part of the scull. When symtoms of extravasation within the cranium, occur from external injury to the head, a perforation should be made thro' the scull to let out the effusion. — when blood is collected between the duramater and scull, a hole may be made in this manner to let it out: Sometimes this effusion is but small, at other times it is of great extent, so that the duramater laying close to the perforation prevents its escape: A spatula introduced between the dura=ramater and scull, will suffer the blood to flow out. sometimes an effusion is collected between the duramater and brain, and upon the removal of the bone, instead of a flat surface, a convex, one is presented, sometimes rising up so as to fill the opening of the bone, but no motion of

the brain will be perceived. These are not symptoms of extravasation between the lobes of the brain, for if this was the case, if effusion had taken place between the lobes of the brain, the motion of the brain could be perceived. I have never seen the duramater punctured in any case in which the patient got well; therefore when it can be avioded, it would not be done. I have cured an effusion in the brain, by perscribing the antiphlogistic regimen and bleeding as often as four or five times a day, for five days; which I believe would not have happened had the duramater been punctured: there rises a fungus portion from the wound, suppuration takes place at its root, and the patient dies. After the opperation of trepaning is gone thro' bring the edges of the scalp into contact, and then apply a simple poultice of bread & milk, which is the most easy application. Lint is not a good dressing; nor should any greasy dressing be applied as it would prevent the discharge flowing out. The poultice should be continued until the granulations appear, and then dress it with simple cerate. The

application of the trephine in this case only re=
=lieves the compression of the brain; & this done, we
must guard against inflammation by bleeding,
cathartics, low diet &c.. The antiphlogistic plan
should be persevered in while any symtoms of
coma continue. and in depressing of the bone,
the edges of the divided scalp. (where - the brain
is completely relieved by elevation, may be de=
=sirous to author to unite by the first intension, as
it would take a much longer time to heal, if it
be poulticed, and suffered to suppurate and granu=
=late.

Lecture 18th.

Diseases of the Eyes

First of this inflammation. This may take
place in the eyelids either in whole or in part;
in the tunica conjunction, or in the globe of the
eye, either in the anterior, or posterior cham=
=ber. Inflammation of the Eyelids sometimes
causes an extravasation of serum into the
allular texture, swelling the part very mu=
=ch,

so that the patient cannot open is eyes; the skin becomes of a scarlet colour; This frequently comes on in the night, the patient supposing it to rain from the bite of an insect. It is, however, not easy to ascertain what is the cause, unless when it arises from mechanical violence. — —

Treatment. In general, if there be much inflammation, bloodletting should be used, which, with the exhibition of a mercurial purge and a low diet, will mostly answer the purpose: If this is not sufficient the application of camphor, or brandy, may be tried. The best way of applying these remedies, is, to dip rags into them, wring them out and apply them over the Eyes. This discharge of fluids in most cases of inflamation of the Eyelids, is but small. Sometimes the edges of the eyelids become excoriated and discharge a viscid purulent matter, agglutinating the Eyelids, so that the patient has to wash them in the morning before he can get them open.

The general opinion is, That it is owing to the ulceration of the mouth of the duct of

the glandula meibomii. I however, believe it owing to ulceration seated at the root of the hairs, resembling in this respect tenia capi=
=tis. a proof of the correctness of this opinion is, that the hairs have been drawn out, and the patient got well. Treatment. A wash of solution of lapis infernalis has been advi=
=sed, taking care to wash it off afterwards, so that none of it may get into the Eyes. Spir=
=maciti has been used with advantage, the most general remedy however, is a solution of saccharum saturni, or emguentum citrenum. I have however found that the unguentum epice applied between the edges of the lids is the best remedy. When this fails, drawing out the hair has been effectual. A Girl of about ten years old was cured by this ointment in about two weeks: She had been afflicted with inflamm=
=ation and ulceration of the Eyelids for 9 years.

Of the Tunica Conjunctiva.

When this is inflamed it becomes red, ow=
=eing to the increased size and action of the

vessels, which were before pellucid but now ad=
=mit red blood. The Eye waters exceedingly, the
patient cannot bear the action of light: The
pain is of a burning kind causing a sensation
as of extranious matter. In some instances the
pain is not confined to the Eye, but effects the
forehead. — sometimes the inflammation is
in a pimple or speck; This may be situated
in the tunica adnata, or cornea. The only di=
=fference in them, in their effects is, that the
latter obstructs vision. Inflammation of the
conjuntive, often spreads over the whole corn=
=er, throwing out coagulable lymph, and if
not soon cured leaves a film behind it, ob=
=structing the sight of the patient. and the
pimple just mentioned, if not soon cured,
leaves an opague speck behind it. The infl=
=ammation of the corner of the Eye, causes an
extravasation of the coagulable lymph, which
occations the disease called rengus. ——
The injuries done to the Eye which occations
inflammation are— 1st Mechanical as
by wounds, or by sand getting into the Eyes,

brichiasis &c. - 2nd acrid substances applied to the eyes, this often occasions blindness, as lime, acids, smoke &c. 3rd In strong light. 4th Too much exercise of the Eye in viewing small objects 5th Cold. 6th Intoxication - 7th small pox, vene= =real disease &c. Inflammation often occurs with= =out being able to assign any reason for it. In= =flammation of the Eyes is sometimes produced by the matter of gonorrhoea - being applied to them. This is a rare occurrence; but when it proceeds from this causes, it is mostly very bad.

Of the Inflammation of the Globe of the Eye.

This may occur either before the christalline lens, or in the posterior chamber behind the lens. It is atte= =nded with great sensibility pain & fever; when it affects the anterior chamber only, there is not so much pain; when it occurs in the pos= =terior chamber of the Eye; it occasions great pain: the fever runs very high, and in general, if it be not soon removed, the sight is lost. The first case I ever saw of this kind, the pati= =ient

died. Treatment. First. remove all mech=
=anical violence, and avoid the remote causes-
If it be produced by some extraneous matter get=
=ting into the Eye, as a speck of sand lodging be=
=tween the lid and the Globe of the Eye, it must
be wiped off; a probe with a piece of soft rag-
wrapped round it, and passed between the
lids, will mostly disengage it. should this be
unsuccessful, water may be injected into the
Eye; if it still remains, by inverting the lid
we are enabled to examine it, and move a way
the sand. If the sand stick in the corner, it
will not be easy to see it, as the Eye will roll
about incessantly, and cannot be held still by
the patient. a Speculum, or the handle of a pair
of scissars will enable us to hold the Eye still,
so that we can examine it and move a way
the offending object with the point of a lancet.-
In Trichiasis, inflammation of the Eyes oc=
=curs from the hair of the lid groing inwards;
When this is the case, pulling the hairs out
will produce a cure. But there is another
affecting the Eye lids; the tarsus itself, is

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sometimes turned in. It may be turned out and
divid; or a piece of the skin of the lid may be cut
~~off~~ out, taking care not to divide the conjunctive
and the divided edges brot into contact and kept
so by the interrupted suture. we can generally
cure inflammation by bleeding, which would
be regulated by the violence of the fever, and
the degree of inflammation. When the pa-
=tient has lost a considerable quantity of
blood from the arm, he can bear cupping and
leeches. If the inflamination still continue,
there is a nother mode which is very benifici-
=al, Viz. scarrifications of the vessels of the
adnata. The next remedy is purging. The
antimonials are found very useful. Lastly.
applications to the Eyes; the mildest reme-
=dies - should be tried first; of which perhaps,
the pitch of sasafras is best, sometimes a
bread & milk poultice answers very well,
but it if frequently found too heavy. crumb
of stale bread put in a gauze bag and boiled
and dipped in rose water, applied to the
Eyes, is found to be a very pleasent app-
=lication.

If this does not answer, laudanum, or Sac sat. Ait. Abb. & laudanum combined in their usual proportions. But astringents should not be employed too soon. The do damage if used before the proper evacuatings have been pre=emised. In such cases, I think two drachms of vinegar greatly improves the remedy when the inflammation has gone on to suppuration and matter is collected under the cornea, it should be immediately discharged by an incision made in the same manner as for cataract, instead of allowing it to open by the natural proces of ulceration, which would render the cornea opaque. When these remedies fail, mercury used so as to excite ptyalism, with vegetable diet often proves useful. Two others circumstances are of the highest importance 1st.- Confining the patient to a dark room. & 2nd. a diet perfectly vegetable. a - seaton in the neck may serve to decrease the inflammation.

Unguis. This sometimes grows over the cornea so as to prevent the sight

entirely, the only remedy is to dissect off the membrane which is easily done with scis=
=ars, except that part which adheres to the cornea, which should be carefully dissected off with a sharp knife. I already mentioned that inflammation sometimes occasions opacity of the cornea, which almost always remains, but which sometimes goes off vo=
=luntarily, if left to itself. Mistaken notions of the nature and cause of the disease have led Physicians into very erroneous practice. Mol=
=asses has been dropped into the Eye, and finely po=
=wdered Glass has been used with a view to wear it off, but they only serve to make it worse. If any part of the cornea remain transparent, an operation may possibly restore vision a=
=gain, by making artificial pupil. I once saw a case where the patient had washed his Eyes with his urine, whilst labouring under gonorrhoea. Inflammation supervened and all the cornea became opaque: The patient applied to me for relief, and by his anxious request I consented to operate on his Eye.

Tho' with little hope, I pus hed the knife thro the cornea & cut off a piece of the iris. The Eye was then closed and the patient put to bed. He can now see to read if the print be large. I never saw such an operation before. When the Eyes are violently inflamed, it is dificult to remove the inflammation. I once had a case of violent inflammation of the Eyes; the patient laboured under great pain, in which bleeding, low diet, purging and salivation &c had been used without succes. Cupping and scarrifications were likewise useless. he was cured by tarwater alone, wetting rags and laying over them.

Fistula lachrimalis.

It is impossible to cure this without a knowledge of anotomy. The tears secreted by the lachrimal glands, which are not used to lubricate the Eyes, are taken up by the puncta lachrimalia and carried to the lachrimal sack, from whence they are conveyed into the nose at the lower part at the lower-turbinated

bone, by means of the ducto adnasum. These too ducts which lead into the sever in common with other-ducts, are liable to strictures. When they are stopped by any means, the become swelled between the obstruction and the eyes: Tirs from in the Eyes, and the sack is protur=
=bed. If you prep on the swelling the teans will regurgitate, and if the prepsure beincreas=
=sed, the teans will be followed by viscid ma=
=ter resembling ~~mucous~~ mucous, which is probably secreted by the inner surfice of the sack.
If the Eyelids stick to gether, they must be washed, and a piece of soft dreping placed between them. Not infrenquently inflammation takes place in the lachrimal sac occasioned by the obstruction of tears, or from the patient taking cold. The inflammation is generally attended with fever, bloodletting and low diet are necepary for the cure. When the sac is distended so as to burst in the Eyes or opens by ulceration, it is then called fistula lachrimatis. In fis=
=tula lachrimatis occurring from strictures of the lachrimal duct, no inconvenience is ex=
=perienced

by the patient, only that arising from the tumor which may easily be removed, by placing the finger on the internal canthus of the Eye, and pressing the sac, the tears will flow out down the cheek. An accumulation of tears in the lachrimal sac, occasion the inflammation to terminate in suppuration. Cure. If the duct can be opened by a probe passed from the sac below the stricture, so as to let the tears flow into the nose. after the probe is withdrawn, a piece of bougie long enough to reach from the outside of the Eye into the nose should be introduced and kept in to prevent the stricture from stopping the passage again. The bougie should be long enough to project about ¼ of an inch, which should be bent down over the cheek. when the duct cannot be opened we must make an opening thro' the os unguis into the nose for the discharge of the tears. It sometimes happens that the punctated edges of the bone, which is made by puncturing the os unguis, throw out a bony matter, and stop up the opening again. The swelling of the sac shows us where to make the opening, I-

I shall now shew the method of operating. When we make an opening thro' the integuments to introduce the punch, the back of the knife should be uppermost to prevent cutting the tendon of the orbicularis palpeb= =rarum; the incision being made a horn is to be passed up the nose to make the necessary resistance a= gainst the puncturing instrument, which is a hol= =low punch invented by Mr. Hunter. It is to be intro= =duced into the sac till it comes in contact with the os unguis, thro' which the opening is to be made. When the opening is made in this manner; a= =ll a bougie is necessary. It is sometimes attended with fungous and carries of the bone. The carious portion of the bone should be extracted, and the fungus treated as in any other part. Bring the edges of the wound together and secure them with adhesive plaster, and the will [illegible]tions flow thro' their newly made channel without difficulty.

Lecture 19th

Cataract.

By this term is meant opacity of the christalline lens or its capsule, which prevents a transmission of light to the retina. It shews itself by the speck behind the pupil, and is most commanly gray, sometimes black, and I have seen it an amber colour. It commences with dimness of vision, compared by patients to looking thro' gauze; and sometimes before any opacity is discernable by looking into the Eye, there is to the patient the appearance of moats, threads, or hairs floating in the air before him. The disease seldom occurs in very young people; mostly about 40, but I have seen it in an Infant. It often, comes on without any external violence. I have seen one case follow a blow, another trichiasis.

A long list of medicines have been employed for the cure of cataract, and mercury may be placed at the head of them, without any good effect. This has been assisted by bloodletting, purging, cupping, blisters, leeches, electricity &c but found

to be of no use: If it arise from mechanical violence, it may disperse, indeed nature unassisted by art, pro=
=poses the power of removing the opacity; of this I have known several — instances. I think it takes place oftenest when the capsula of the lens is opaque, and oftener in women than in men. I have seen the cases of two young women in whom the absor=
=ption occurred. They could see by the edges of the convex lens, which makes me believe the lens was removed. I have seen another case brot on by an unsuccessful attempt to couch. As medi=
=cines are unsuccessful in the cure of this disease, it is a happy circumstance that it may be reli=
=eved by surgery.

Two opperations have been proposed, Viz. 1st Couching and 2nd Extracting. Couching is perfor=
=med with needles this is passed thro' the sclo=
=otic coat about one tenth of an inch from its junction with the cornia, and passed in till it gets to the center of the lens; It is there tur=
=ned with its flat part against the lens, which is depressed below the Vitrious humor; if it should rise the opperation much should be repeated.

Extraction consists in making a semisection of the cornea, thro' which the Lens is removed from the Eye. Both operations hath been performed, that of couching is the most antiant, that of extract=ing the best. It is the best, because 1st. the opera=tion is not so painful; This is proved by com=parative operations. The same patient has had the Lens extracted from one Eye, and depressed in the other.

2nd. When the cataract is taken out, it can never again obscure vission, but it may rise repeatedly when depressed occasioning a return of blindness; and each time the operation must be repeated. It sometimes hangs loose in the posterior cham=ber of the Eye, and when the patient stoops ca=uses blindness by its falling upon and closeing the pupil. It has been allidged that the Lens may be absorbed, but this is seldom the case.

3d. When the cataract is fluid it may be eva=culated, but cannot be depressed. I have k=nown it to be entirely fluid. It may be of the consistance of calves foot jelly, or of the white of an Egg, not compleatly evaguelated.

4th When the capsula is opaque as well as the lens it may be pulled out, but such opaque capsula cannot be depressed with the couching needle. The opaque capsule is by no means a rare occurrence. It can=not be depressed because it stretches and beats down in that part in contact with the needle, and after the operation returns to its place by its elasticity.

5th When adhesions exist between the capsula of the lens and iris, by opening the cornea, they may be torn in extraction. but not in depression with=out injury to the iris. In one instance I saw the iris torn off.

The inconveniences attributed to extraction are,

1st An opacity of the cornea arising from the cicatrix, but none exist when it is divided by a sharp knife, with but one stroke. If scissors be employed there is sometimes an opacity, but this is not before the pupil, and of course will not impede vision.

2nd The passage of the lens thro' the pupil is said to stretch the iris so irregularly as to form an irregular pupil. This sometimes does take place, but it does not prevent vision, besides,

it occurs sometimes in depression. The patient sees as well afterwards as before.

3dly. The hazard of cutting the iris in passing the knife across the cornea; unless the operation be very careful in passing the knife the straight across the Eye, the aqueous humor will escape thro' the section of the cornea, and the iris will fold it=self upon the edge of the knife, and part of it will be cut away; but this may be avoidded by rubing the anterior part of the Eye, which dis=engages the iris.

4thly. The great danger that the vitrious humor may escape: but this only arises in consequence of undue pression being made the moment the section of the cornea is finished. Prepare at the time is unnecessary and should not be made.

As every case of cataract does not promise equal succes. it is of consequence to know what circumstances are unfavourable. When it is combined with other diseases the operation is improper. The circumstances favorable to the operation are, the Eyelids should be

free from <u>sectum</u>. The patient should be free from pain in the head; When the operation has been performed during pain in the head, the pain has been much increased. The surgeon should not be deceived in examining the Eye, this may happen from opaque spots on the corneay and a particular reflexion of light from the Eye. He may avoid the former by looking at the Eye sidewise, the pupil will be seen below the spot. In the latter the patient should be placed with his side to the windows, that the rays of light may fall obliquely the Eye; the pupils should contract and dilate freely. This contraction an=
=delatation, does not however, prove the retina to be sound; and it may be sound and the pupil be immoviable. If the patient can distinguish light from darkness, the operation may be ad=
=vised. In cases of immobility of the pupil = when the retina is sound, the iris probably adheres to the capsula of the lens. I saw the case of a woman who had a cataract in each Eye, the pupil moves freely in both. I opera=
=ted, and found both lenses as hard nearly as sto=
=ne.

The patient saw but with one Eye tho' the operation was performed equally in each. The patient dis=
=tinguishing light from darkness is not a certain test.
Before advising the operation, it will be necessary to enquire if the patient be subject to coughing, or apt to vomit or sneeze. Some old people sneeze vìolently.—If the patient be subject to sneezing, we should chuse the time for operating when he is least affected with it. I have seen pre=
=ssure on the upper lip with the finger when the inclenation of sneezing comes on stoped it. I knew a case when sneezing ruptured a vessel in the iris; hemorrhagy ensued, which did not stop till a coagulation of blood took place. This extended between the divided edges of the cornia and prevented their union. I was fearful of removing the coagulum lest hemorrhagy should again ensue. The Eye suppurated and the patient lost his sight. Sneezing might also force out the vitrious humor. Persons apt to faint on every oc=
=asion are bad subjects, they should take Lauda=
=num before the operation. As inflammation sometimes occurs to a considerable extent,

and may go on to suppuration it is proper to con=
=fine the patient to a low diet for a few days; and to
reduce the inflammatory ~~constitution~~ diathisis
it will be necessary to use bleeding, purging
&c 8 or 10 days before the operation. A day or
two before operating a blister may be applyed
to the back of the neck. The bowels should also
be opened to prevent the inconvenience of raising
for a few days. The best seasons for operating
are spring and autumn. Cold or hot weather
is not proper because in the first, the room can=
=not be kept equally warm, which exposes the
patient to the risk of taking cold; in the in latter
he is apt to be restless. The instruments for
operating are, First, for making an incision
of the cornea, a knife after the direction of the
baron Wenzel. It should gradually increase
in width from the point to the handle heel,
it thus serves as a wedge to prevent the escape
of the aqueous humor. It should be thin but
sufficiently firm not to be broken. The upper
edge must be blunt till near the point,
the rest very sharp, The knife should be

very sharp; it may be examined with a micrisiope
or a much easier way is to look at it before a looking=
=Glass. In choosing the proper Knifes we should
get one wider at the handle than the semidiameter
of the cornea. 2nd A needle a little corved at the
point. with which the capsula of the christalline
lens may be torn. 3rd. A little scoop of Gold
or silver to extract small fragments that remain
behind. — 4th a small hook to be passed thro
the papil and fixed in the body of the chrystalline
Lens. for its extraction. — 5th a small pair
of faucips for the extraction of small fragments of
the torn capsula that may remain.

It was the custom of antient surgeons to use the
Specelum oculi. I use no instrument of this kind
to steady the Eye. The great objection to all instru=
=ments of this kind is. that they occupy one hand
of the operator. The surgeon cannot rub the anti=
=rior part of the Eye, besides, it gives pain to the
patient and may excite inflammation. In pro=
=ceeding to the operation, I find it is of use, while
fixing the Eye, to assure the patient there is no
pain or danger attending it, - The patient is

seated on a low chair with is side to the window, or else the reflexion of light from the cornea, will prevent you from seeing the cataract, a bandage is applied round the head just above the Eyes, having two depending compresses attached to it, to cover the Eyes: That compress hanging over the affected Eye is pinned up to the bandage; if the hair is long before, it should be cut, to prevent the chance of its getting into and irritating the Eye. The surgeon is seated on a chair considerable higher than that of the patient, and taking the knife into the right or left hand, according as the right or left side is to be operated upon, he proceeds to make the section of the cornea. The patients head should be supported on the breast of ~~a man~~ an assistant, who raises the upper Eyelids; in doing this the skin should be folded on the superciliary ridge, so as to prevent its closing. The tarsus should be pressed against the superciliary frontal margin ridge of the socket. The surgeon pulls down the under lid, and waits till the Eye is steady; at that moment he applies the point of the knife to the cornea at about 1/16 of an inch from the Sclerotica.—

he only applies the knife, does not suddenly puncture, for at that time the Eye generally re=
=ceeds from the knife, it should be followed by the knife, & the moment it becomes fixed, the puncture should be made, The knife is then ca=
=ried across the Eye, and brot out at the ~~Eye~~ oppo=
=site side, making a simecircular inscipsion.
If while the section is making, by the discharg
of the aqueous humor, the iris comis forward so as to endanger its being wounded, the motion of the knife must be stoped, and the iris made to re=
=ceed, by gentley puhing the cornea, the inscis=
=sion is then to be compleated.

That the Eye may not be the least prejud upon, the assistant who raises the upperlid, should let it fall as soon as the point of the knife has pas=
=sed thro the opposite side of the cornea. In making the incisjon, never draw back the kn=
=ife, for if this be done the knife no longer acts as a wedge, to prevent the escape of the aqueous humor; the knife is wide enough to ~~make~~ cut itself. out, But if owing to the motion of the Eye, or any other causes, the knife should be drawn bak

It would be advisable to desist from the operation, and to defer it till the ~~cornea~~ wound in the cornea is healed. Barron Wenzel – advises puncture chrystalline lens during the section of the cornea, by dipping the ~~cornea~~ point of the knife into the pupil. This might be done if the Eye were very steady, but it is mostly so unsteady as to render the barrons directions unpracticable. I prefer – tearing the capsula afterwards with a needle, with this the capsula can be much easier torn, and if it should be opaque, it can then be much easier extracted. In tearing the capsula, care must be had not to injure the iris: this being done, the Eye must be closed to give it rest and that the pupil may dilate.

After resting a few minutes, the Eye is opened by the surgeon, & gradual pressure made on the ball, at the same time the divided portion of the cornea is raised a little with the scoop. If the lens does not come easily thro' the pupil the surgeon takes hold of it with the needle or hook to facilitate its extraction. The moment it is out, the lids should be closed.

and remain so for some time, the are afterwards opened, and the state of the pupil examined, If the capsule be not opaque, the patient sees, if opaque, the pupil remains White. The Surgeon should next proceed to extract the fragments of the capsula: These are often brot into the anterior chamber of the Eye, and discharged by gently rubing the lid over the corned; but if the remain in the Eye; the scoop should be employed: this should not be pushed too far for fear of injuring the capsula of the vitrious humor. If the capsula of the lens is to be taken out, a small forceps is the best instrument. Sometimes the lens cannot be extracted by any moderate degree of pressure, tho aided by the hook: it is then probable its capsula adheres to the iris. The adhesiones must be torn away by the needle but this requires great nicety. Take care not to throw the iris into folds or it may be torn. Sometimes before the operation we know the capsula is opaque. We judge of this by spots of opacity appearing as through detached from the lens. In this case, often

the section of the cornea, as it is known the capsula must be extracted; I advise the anterior part of the capsula to be pinched up with the forceps by pulling the whole membrane, may be easily taken out. The capsula is extracted first, because it can be readily laid hold of while the lens remain in the Eye. The lens when divested of its capsula falls to the bottom of the Eye, it may be extracted with a small hook. a small porton of the vitrious humor always escapes. after removing cataract. it is costomary to exhibit various substances, as waches and the like, to know if the patient has vision, but the Eye should not be kept open two long. during the operation, none of the relations of the patient should be present. a Dutchman who had been blind five years, was operated upon for a cataract, his Wife stood by during the operation and was the first person he saw. The poor man burst into a flood of tears. and it was with difficulty he was prevented from litterally crying his Eyes out. After the operation his compleated. a soft dry rag is

to be applied to the Eye. The depending piece of the circular bandage. is to be unpinned. and it will turn down over the Eye; on this a bandage should be applied and carried round the head. The patient is then put to bed, and ordered to lay on his back. to prevent the escape of the humors. all light should be excluded from the apartment: The patient should live on a diet of vegetables. In taking drink he must not raise his head; a teapot without a lid should be used for giving him drink, The patients hands should be secured by pieces of tape tied to the bedside, to prevent rubing his Eyes in his sleep. In 8 or 10 days the Eye may be examined. If pain or fever comes on use remedies to remove them, and change the dressings every day, as the moisture that is discharged from the Eye, is absorbed by the dressings, which becoming dry, cause irritation: When the dressings are changed always pull down the under Eyelid. The hairs, if there got into the inveiglion of the cornea,

prevent its healing.

Lecture 20th.

Hernia.

Hernia may be defined a tumor occasioned by a protrusion of some of the contents of the abdomen. This takes place at different parts of the body, but most frequently in the groin, owening to the parietes of the belley. being weeker at that part.

Opposite the groin there is a ~~passage open~~ opening for the passage of the permatic cord in men, and for the round ligaments in women, thro which the parts are protruded; either the oneutum. or intestines. This protusion may happen at ~~different times~~ parts of the body, when the tu=
=mor is found in the naval, it is called um=
=bilical hernia; when in the groin, bubo=
=nocele; and in the thigh, femoral hernia.

In every instance it is caused by a pro=
=trusion of some part of the omentum, or of the obmentary canel. In every hernia,

the protruded parts are inclosed in a sac which is formed by an elongation of the peritoneum, - I have is one species of hernia, called hernia congenita, well worthy your attention, here the bowels are in contact with the testacles, the tunica vaginalis, which is properly a peritoneal covering of the testes passes with it in its descent down into the scrotum. the upper part of this sac generaly closes upround the spasmatic cord, immediately after the descent of the testicle which about birth, or two or three days after, or before. It sometimes so happens that this descent of the scrotum does not immediately close up after the descent of the testicles, but remains open for some time, and when it does not close up, by coughing, sneezing, crying &c. - hernia is produced, as there are several kinds of hernia, I shall at present confine myself to that species called bubonocele.

Bubonocele.

The symtoms are a swelling in the groin beginning at the abdominal ring and passing into the scrotum

or labia pudenta. the testicle can be felt at the bottom of the scrotum; the tumor is soft bears handling well and when the patient lies down disappears. Pressure on the abdomen makes it more tight, and when the surgeon lays his hand on it and the patient coughs, he will feel pressure made against his hand, causing a sensation as if distended with wind. There are some diseases with which hernia is likely to be confounded as bubo; swelled testicle, lumbar abscess and hydrocele, but by paying attention to circumstances it is very easy to distinguish between them.

A bubo is generally preceded by a chancre; is hard and painful & the tumor does not disappear upon laying down; It is likewise very easy to distinguish between bubonocele, and, swelled testicle, or hydrocele. The testicle is hard and painful to the touch, is only found at the bottom of the scrotum, and the spermatic cord can be traced to the abdominal rings at which place it is free from. In hydrocele the tumor begins at the bottom of the scrotum, and works upwards: Whereas the hernia begins to swell at the top of the groin and

works downwards. The influctuation may be felt in hydrocele; and in swelled testicle or hydrocele we cannot reduce the tumor by squeezing it. But hydrocele is sometimes more difficult. I have seen it envelloped in a cist. which when the patient strained hard was protuded, the testis were at the bottom of it. Hydrocele is ino general diaphonous. a case came under my notice, which was supposed to be hernia, & as such was trusted. I was convinced on examining it, that it was hydrocele. It was diaphonous, admitting the light to pass thro the tumor; and was cured by tapping and afterwards by injecting of wine.

In the lumber abscess, the matter passes from its seat in the Psoas muscles, down under Poupart ligament, following the course of the muscles, & from a tumor in the upperend anterior part of the thigh, at which place the fluctuation can be felt; and the tumor can be pushed from the thigh up into the cavity of the abdomen and vice=versa, according as pressure is made or either. ~~is made~~ If your hand be laid on the abdomen and pressure made, the tumor on the upper

part of the thigh will be rendered more full and tense. The great danger liable to take place in hernia, is from great inflamation which ~~causes~~ from the stoppage of the circulation, and of the forces, in consequence of stricture comeing on. This stricture ~~coming on~~ may be passed whether by the neck of the sacy or by the tendon of the external obliqua. When the existance of a rapture is ascertained it should be reduced and supported by the application of a truss — Not unfrequently the patient can reduce it himself; but when he cannot, the Physician, by laying him down in a horizontal position, for the most part can effect it; after which a truss should be applied di=rectly over the orrifice. The truss is very generally applied on the soft part of the pubis, so as to press the spermatic cord occasioning, great uneasiness to the patient if continued for any length of time; or applid so far to the groin as not effectually to close the rapture. The best way is to examine exactly with your fingers, tracing the tumor

into the abdomon, and you find the orrifice, apply the truss, so that the soft part shall be exactly over it, just above upper edge of the pubis. Trusses are mostly employed for a partic=ular age; but the should be applied when ne=cessary at all ages.

Strictures sometimes prevent the reduction of the protruded part but we cannot always reduce them even when there is no structure, and this for several reasons; first because too large a quantity of bowells are have collec=ted in the tumor to allow of being returned. 2nd the next difficulty in the reduction, is from an alteration of a part of the omentum; and 3rd from adhesions taking plac between the protruded parts and the sides of the opening, or from the adhesion of the protruded parts a=mongst themselves.

When the difficulty of reduction arises from adhesions as in the last case, it will admit of no remedy, only being supported by a truss. When there has been no adhesions I have succeeded by confineing the patient

to a horizontal position, low diet, bleeding, —
carthartics, and then applying a truss. When
adhesions takes place, so that the surgeon is una=
=bled to reduce the tumor, a sac made just so
as to contanit, should be applied, or else the
hernia will continue to enlarge tilo its gets to
a great size. I saw one case in which the
sac had got down to the knees. If the patient
when in such a situation, neglects the truss,
he is not only in great distress, but in danger
of strangulation. The symtoms of strangula=
=tion are increase of hardness of the tumor, ob=
=stinate costiveness, pain if the patient
stand, up, hard, contracted, tense pulse; &
sometimes vomiting, and the tumor becomes
painful to the tuleh. When called to a case
of strangulated hernia, it requires imma=
=diate care and attention. In proceeding
to return the protruded part, the patient sho=
=uld be placed in that situation which will
throw the contents of the tumor towards the
abdumen. He should be placed on a firm bed
or matress, with his buttocks raised conside=
=rably

highest and the thigh lent upon his body, to relax the muscles. When this is done, squeez=ing the protruded parts cautiously with your hand so as not to injure the bowels. When the pa=tient can do this himself, it is best, as he will be likely to use less violence, so as not to injure any of the parts. This operation is called tax=is — If this is not sufficient bleeding copiously has been of use, & Mr Pott advises to continue it ad deliquium animi. And shou=ty if it can be accomplished, The bleeding tends to prevent any inflammation. I have not however seen one case of bleeding ad de=liquium anime where the reduction suc=ceeded immediately after. Cathatics are then generally given. I have found cream of tartar given with about 8 or 10 grains of jalap, and one drop of mint answer very well. Along with this the warm bath should be used; the patient should be kept in till he becomes very week, and while in the bath the surgeon should try again to reduce it. This, from producing a general

relaxation, will I have no doubt, succeed fre=
=quently; I have therefore a very high opinion
of warm bathing in strangulated hernia,
When all these remedies fail infections ma=
=de by a decoction of tobacco (℥j to a point of
water) — may be used; This decoction is
to be thrown up so as to occasion nausea
and general relaxation. This is the most
succesful remedy in strangulated hernia
The fumes of tobacco are not so conveni=
=ent, as they require a peculiar apparatus,
and sometimes the exist spasms. When
all these methods fail, the application of
ice or snow has proved useful. Strangu=
=lated hernia has been reduced by cold.
This remedy is pertinularly recommended
by Mr Wilmer; I would not hesitate to
emply it, When other remedies fail.
It would be continued for sometimes per=
=haps for the span of three or four hours,
if necessary. If all these remedies fail
we must have recourse to an operation,
for if the patient is not relieved by some

means, he soon grows worse) the sickness be-
comes more distressing, the pain is more in-
tense, the belly swells, the fever runs high,
he cough, cold sweats &c occur; but a while th-
ese symtoms cease, and the patient thinks
himself getting better, and in some instan-
ces the contents of the tumor voluntarily
go up; but the symtoms soon return worse
than before, and death quickly closes the
scene from mortification of the intestines
coming on. It is difficult to tell when is
the exact time to perform the operation,
because sometimes the bowels mortify
by the pressure in a short time, and at
other times the patient will bear it for
four or five days, and, then get well:
but in general I would advise, if the above
remedies fail, to perform it, in at most 30 hours
after its commencement, if the strangulation
remain. I have ounce succeeded in reducing
the tumor after all other remedies failed, by
raising the foot of the bed considerably higher
in this case the tumor receeded voluntarily,

in the course of the night, — There are two methods for operating for hernia bud first for. —

Bubonocele.

In proceeding to perform this, the first precaution is, to shave away the hair. Then make an incision in the direction of poupart's ligament, about 4 inches in length and descect up the upper part, laying the tendon of the external oblique bare, so as to expose the ring. This done, puncture the tendon in the direction of its fibres, at a small distance a bout an inch from the ring. A director is introduced at the puncture and passed out at the abdominal ring; the part of the tendon lying over the director is divided lengthwise of its fibres, an attempt is now made to reduce the contents by taxis, This practice has been disapproved by some surgeons, who say that the contents of the sac may be in such a condition as to forbid reduction, and that the sac should be opened to examine its contents, for, say they, if any of the parts be killed, or sac contain acrid serum, and be returned in this state into the abdomen, it will

occasion great inflammation, but I would ask these surgeons, if they would not before the operation use every exertion to reduce it; and in the present case, if it can be reduced, it will prevent the necessity of opening the sac, by which the risk of peritoneal inflammation will be avoided. Opening the sac would produce a communication for the air to the cavity of the abdomen; and all such communications are attended with violent inflammation, which mostly terminate fatally on the third day or sooner, should the attempt to reduce the protruded contents prove ineffectual, the operation must be continued. The incision is continued to the bottom of the scrotum, and the sac is laid bare: after this, attempts to snatch thro' the sack should be repeatedly made with the point of a scalpel; trying with a probe after each scratch, to see if a puncture be made. When a puncture be made introduce a director, and with a blunt pointed bistoury enlarge the orifice so as to admit the finger, which is the best director for the knife; after that the sac is divided of its whole length from the ring. Next examine the contents of the sac, which if sound

must be carefully returned to the abdomen, This
at all times cannot be done, for three reasons:
first adhesions, 2.nd - a change in some of the
protruded parts, or 3.rd A structure in the neck
of the sac - alone. When this cannot be done on
account of a stricture in the mouth of the sac, the
stricture is then to be divided, taking care not to
wound the intestines, the finger should be in=
=troduced as far as possible for a direction for
the knife, & in general the mouth of the sac
is not so small but that the point of the finger
may enter a little way. sometimes adhesions
takes place so that the intestines cannot re=
=turn when the sac is laid open, these may be ea=
=sily separated either with the finger or the ha=
=ndle of the scalpel. If the punctured part be
altered in shape the ring must be dilated to ad=
=mit of its return, except it be formed by om=
=entum, then the altered part may be cut off.
If mortification of the protruded part takes place
it should be separated, and the sound part of
the intestine joined by the interrupted suture,
and sewed fast to the sides of the wounds notwith=
=standing

the forces will for sometime escape thro the orifice, it will mostly in the end heal well. —— Altho in bubonocele, it is best not to open the sac when it can be avoided, yet in femoral, ruptures, I believe it is mostly safest to open the hernial sac and then to divide the structure. The sac here is externally thin, and scarcely to be seen In proceeding with this operation, a great deal of caution is necessary to prevent wou=nding the intestines. When cutting near the neck of the sac, care should be had not to lean to either side, because on the outside of the neck of the hernial sac, passes the epigastric artery, and on the inside of it the spermatic cord, crossing each other directly over the structured part, so that if you cut towards the inside, you will wound the spermatic cord, and if the outside, the epigastric artery, and if posteriorly, the great bloodvessels. To remedy this Mr. Gimbernat proposed to dilate the stricture by making the incision towards the pubis, this method, is, after opening the sac, to in=troduce a director or the finger which is better,

a long with the bistoury — having its edge looking towards the pubis; when you come to the stricture the incision is to be made towards the pubis, dividing the stricture so as to cut behind the sper=matic cord. Dr. Monro advises to cut from the neck of the sac towards the navel, so that by keeping that direction you might dilate the stricture towards the angle formed by the epi=gastric artery and spermatic cord, and thereby avoid cutting either.

Mr. Hay supposes that the femoral ligament forms the chief obstruction to the reduction of the protruded parts.

I would advise you to read Potts, Hay, and Cooper on this subject. Sometimes the finger cannot be introduced on account of the smallness of the aperture. When this happens, introduce a director under the stricture, and then with a bistouri lay it open sufficiently to reduce the protruded parts.

If the protruded part of the intestines is found to be mortified, that part must be removed, taking care to cut thro a sound part, that the dead portion may be compleated separated, and the sound part stitched to the side of the wound, so that the intestines may protrude a bout an inch.

The protruded parts will in time as the wound heals, be retracted within the cavity of the abdomen, and as they are drawn in the edges will come nearer in contact, till at last the will unite and form a perfect canal, compleatly within the abdomen; and the patient will discharge the forces in the natural way.

Sometimes the omentum is found in a sp=
=hasalus state. It should never be returned so to the abdomen, or else the dead part will cause peritoneal inflammation, the folds must be spread out to extricate the intestines, and the mortified part may be separated by a pair of scipsars. If an artery is wounded or divided, it must be taken up, leaving the thread suf=
=ficiently long to reach out of the abdomen.

Mr Hay has proposed taking off this portion

with a legature, tying it so tight as only to incr=
=ent the omentum at first and then daily tighten
it, till at last it is compleatly separated; and
when the gangreonous part of the omentum, is
protruded down thro the omentum, his method
is a very good one. —

Lecture 21st.

Hydrocel.

Hydrocele is a term applied to a disease, consis=
=ting of a preternatural collection of water in
the scrotum. Of this disease there are three sp=
=ecies. The first is an effusion of water into
the cellular substance of the scrotum. The cells
communicate. The second species is when the
water is contained between the tunica vaginalis
testis. The third species is when the water is
contained in a cist, or cists, on the spermatic
cord, or body of the testis. — —

The first which is an anasarcous tumor, is a symptom of a general dropsy, and is easily distinguished from the other species of hydrocele. It is of a smooth equal surface, and is diffused equally all over the scrotum. The tennor has a dougey feel; besides indentations may be made by pressure with the fingers. The skin is nearly of its natural colour, and diaphonous. The skin of the penis also becomes distended. If the patient lie down no diminution of bulk takes plac in the tumor; the swelling begins at the bottom of the scrotum. The testicle can be easily felt at the beginning of the disease and likewise the spermatic cord, and no fluctuation can be perceived.

The second kind, or that of the Tunica vaginalis) is owing either to an increased action of the absorbents. The swelling in this species begins at the bottom of the scrotum, soft at first, but gradually grows more and tense, and cannot be reduced by pressure; thos sometimes it collects suddenly from the rupture of a lyanphatic. The tumor

is small at first, in which state the testis can be readily felt, but when the tumor is large it is not perceivable. The fluctuations can readily be perceived, and the tumor is deaphanous. The disease most likely to be confounded with it is hernia. It is however, easily distinguished from hernia, as in the former the tumor begins in the bottom of the scrotum and extends upwards, but in the latter it begins above, and works downwards, Hydrocele is always permanent, whereas in hernia, the tumor often disappears when we lay down, Schirrous of the testicle has sometimes been confounded with it. We can distinguish between hydrocele and schirrous of the testicle, by the latter having swelled spermatic cord, and in schirrous the tumor is flattened, and is heavier than in hydrocele. It is scarcely possible to confund it with hernia humoralis, This kind of hydrocele is however very much complicated so as to require much attention to distinguish between it and other diseases. — —

The third species is when water is contained

in one or more cists of the spermatic cord. How the testicle can be felt at the bottom of the scrotum. The tumor is diaphanous, and swells up to the abdominal ring; and in one case I believe the tumor extended thro the ring itself. In such cases there is much difficulty in dis=tinguishing from hernia, only if we prep the tumor so that the water is forced into the abdomen, the instant we take away the presure it will return again, that presu on the sides of the tumor causes no difference if the former, but will often succeed in re=moving the latter. Having mentioned the different species, I shall next proceed to the "Treatment" — no circumsta=nces results to the patient from hydrocele, but from weight and bulk of the tumor; — tho in hot wheather at times the skin ex=coriates, and if the patient walk about causes pain in the back from the weight, this is re=lieved by the use of a suspensory bandage, which sets so easy, and is worn with so little inconvenience, that some patients refuse

to submit to the operation. The first species which is that of anesarious hydrocele, is gene=rally cured by medical means. It however at times happens that an operation for the discharge of the fluid is necessary for the cure. This I would advise to be slow by means of small punctures made with the point of a lancet, that it may ooze out. this is preferable to making an opening with caustic, or the introduction of a seaton, or making a deep incision which may pro=duce mortification. The punctures are to be covered with dry lint; they should be made in four or five places. Sometimes an anaesarious tumor is produced by a bursting of the tunica vaginalis. A case came under my care, in which as the patient was sit=ting, still he felt something snap in the scrotum, and shortly after a tumor ap=peared, which was soft and diffused itself gradually over the whole scrotum, the skin became black which very much alarmed the patient, as he suspected mortification

was coming on, Three Phisicians were called in, who not understanding the nature of the case were suspicious that his apprehentions were too well founded. Mr. Hunter supposed that the tunica vaginalis was ruptured, and the colour was owing to the escape of the blood; This proposition was readily agreed tos, and the patient was informed that in time the blood would be absorbed, and the wound in the tunica vaginalis healed, but that he would be subject to a return of the complaint; all of which turned out as they predicted.
Next of the.

Hydrocele of the Tunica vaginalis.

Dr. Elie mentions a case of the hydrocele of the tunica vaginalis, which was cured by purging. I have cured it by causeing water to be poured on it out of the spout of a tea-kettle two or three times a day. This method will often succeed in Children — Sometimes it is absorbed without any aid. When all these fail, it is necessary to have recourse to an operation. Relief may-

commonly be obtained by evacuating the water; This is done by means of a common Ins=
=cet, which I prefer, or an instrument called a trocar, which consists of a silver tube, in which is a stilette, projecting beyond the cannula about one fourth of an inch, which part is triangular and sharp. trocer is to be pushed thro' the scrotum into the cavity of the hydrocele; when introduced, the stilette is withdrawn to suffer the water to draw off; after that is done the wound is closed by ap=
=plying a strip of adhesive plaster, and the part supported by a suspensary bandage.
This is only palliative, and is not sufficient to cure the disease compleatly. But to produce a radical cure it is necessary something more should be done. There are several modes of effecting a radical cure; the object of them all is to effect amon or adhesive between the tunicavaginw=
=lis and testis; of which I shall now mention only four. The most antient of these is to ma=
=ke a long incision thro' the scrotum, so

as to examine the state of the testis. when it is ascertained to be free from sibirrous, but is placed in the cavity between the tunica vagi=
=nalis and body of the testis, to excite an inflam=
=mation of the part, so that the two surfaces may adhere together: the lint is to be left in till sappuration takes place freely, then it is to be extracted, when the tunica vaginalis adheres to the testis, forming an union with it: this frequently succeeds, but it causes great pain and inflammation; and it not unfrequently happens that abscesses form after the patient tho is thought to be well, I have seen absces=
=ses formed in the scrotum, in consequence of some portion of thread being left behind, six weeks after the wound had healed up, this I have seen once, but it frequently happens, under this treatment.

The next method is by means of an issue formed by means of caustic; this is not only attended with great pain and inflammation but causes a large saphuration sore, to the no small distress of the patient.

Mr. Ellis has proposed to apply it only the size of a shilling, which he thinks would be sufficient to excite inflammation over the whole cavity but this often produces violent inflammation of the whole scrotum, and sometimes mortification. This method is seldom used at present.

The next method is to pass a seton thro' the scrotum, between the tunica vasmatic and testis. This method is recommended by Mr Potts, but it is exceptionable, because sometimes the adhesions will take place only at the part of contact of the seton with the tunica vaginalis, and there the disease may again occur, and likewise were there are cists in the body of the testis this treatment will not do, and these cannot be opened without laying open the tunica vaginalis, but the cure must be effected by suppuration. Mr Earl has revived the method of throwing stimulating injections into the scrotum, he uses the wine diluted with one half water. I have always used it

diluted with water. some advise a solution of white vitriol, I and I have no doubt but it wold answer very well, some have advised a so=
=lution of corrosive sublimate; but if this is=
employed, it should, it Should be used very=
weak. After the water is drawn off, an invis=
=sion of wine may be thrown into the tunica
vegineli; This will sometimes cause a good
=deal of pain across the lumbar region, and
has produced syncope, It should soon be
let out, perhaps after three or four minutes,
inflammation will come on in a bout=
three or four days, but never runs very high
and soon subsides, without any trouble.
If it should run high venesection may be
necessary. — Frequently in the cessation of
inflammation, the water again returns, in
all cases of that sort, I have effected a cure
by pouring cold water over the part, to the
quantity of a bout half a gallon per day.
When the first operation fails, it is not so
severe, but that the patient will mostly
submit to it a gain. Where one or two injec=
=tions

will not do, Mr Hunter proposes to make an
inscission about an inch long in the an-
terior and upper part of the scrotum, so that the
finger may be introduced to ascertain if any
hydatids exist, and fill the space between the
tunica vaginalis and testicle, with flour or a small
bolus of dough, to cause an equable suppuration
over the whole cavity; after four or five days, sup-
puration will have taken place, at which time
the dough will have become soft, so as to re-
semble only thickened pus, in consequence of
mixing with the fluids thrown into the cavity
The contraction of the scrotum which takes place
will force out the dough gradually, and as it is
removed or evacuated, the sides are brot into
contact gradually or regularly adhesions take
place, and the cure takes place is effected. I
have performed this operation several times
And believe it to be the best mode of curing
the complaint. I now shew you the op-
eration of injecting it with wine.
The instruments all a trocar which consists
of a silver cannula about three inches long

with a small handle to the end of it, in this tube is a Stilette projecting about 1/8 of a inch beyond the end of it - a cock with a bladder or gumelattic bag fixed to the end if it, for containing the injection. The patient is ~~fix~~ ed seated on the edge of a chair and directed to grasp the bottom of it with his hands; because if his hands are at liberty he will be apt to disturb the surgeon.

When fixed in this manner, so that the scrotum projects over the edge of the chair, the operator takes hold of it, and causes a tenceness in that part of the tumor, when he wishes to make the puncture, and then pushes in the trocar; as soon as this instrument has penetrated the cavity; the stilette is withdrawn and the cannula pushed further in, to prevent the tunica vaginalis slipping off the end of the tube, which would prevent the water from passing out, when the water is drawn off, the injection of port wine is thrown in relieved a while, and then suffered to run out

The wound is closed with adhesive plaster, the se-
=cretum is suspended, and the patient put to Bed.
Care must be had to keep the canula thro' the
tunica vaginalis when you inject, else the
whole of the content will be thrown into the
cellular substance, without effecting its way
into the proper place, and a new operation will
be necessary, care should also be had to examine
well where you puncture the scrotum, to avoid
wounding the testicle which too often happens.
A gentleman troubled with hydrocele called a sur-
=geon to his aid, who performed the usual opera-
=tion with a trocar, but to his great astonish-
=ment no water flowed upon his withdrawing the
Stilette. — — —

Another surgeon was called, he likewise
performed the operation nearly in the same
place, but with similar success

A third surgeon was called, but not with the
same disappointment as the others. They now
agreed that it was a very difficult case to un-
=derstand. M.r Hunter aid was then desired who
upon examineing the case and recollecting the

pecular sensation the testis gives when squeeze=
=ed; tho' he could not feel its situation, yet by
the sensation caused by squeezing, he found
the testis ato be attached to the scrotum at the
anterior part just were they made their punc=
=tures; the trocar had been pushed into the body
of the testis. He then pulled the scrotum at the lower
and back part of the tumor. where the testis us=
=ually lies, and the water flowed out as is usual
in the common cases. —

Lecture 22nd

Lythotomy.

Calculous concretions are found in different parts of the body, I have found one of the bigness of a pea at the root of the tongue. — They are found in the salivary ducts, in the lungs, uterus &c. — but they are most commonly found in the organs of urine. The incrustations found deposited on the sides of the vessels which hold urine, prove that the Calculus substance it contains may readily form a stone. The quantity of calculous matter varies in different persons, and it is greater at one time than another, in the urine of the same person. It is not my intentions to inquire into the circumstances which dispose the body to the formation of calculus, it being sufficient for my purpose to know that it can be formed by a disposition from the urine.

I have seen a calculus concretion form on

the end of a catheter that had remained in the bladder but for a few days. — The different kinds of substances that have been found in the sub=stances of calculi, prove sufficiently that any solid substance remaining in the bladder for a few days, may be a nucleus for a stone. — The stone is not always of one uniform consis=tance, but consists of several lamina, some of which are hard and some are soft; they are like=wise of different colours, some are white, and some are dark brown.

The reason of this differance, I believe has never been satisfactorily accounted for. Stone is not exclusively found in the bladder; it is found frequently in the kidneys and prostrate gland. I believe it most frequently originates in the kidneys and washed down the Ureters into the bladder, tho' this is not alway the case. When in the kidneys it occasions pain in the small of the back. a case of this kind was cured in a gentleman by riding on horse back from German-town to Phila=delphia. But he was the same day

affected with stone in the bladder. When stones are formed in the kidneys, there is a considerable differance from what happens when formed in the bladder. Mr. Bloomfield has discribed the symtoms accurately, that I shall give them in is own words. —

When Stone exists in the bladders, they occasion a distention of that viscus, by preventing a discharge of urine, but when in the kidney they prevent the urine from flowing into the bladder. The stone frequently lodges in the ureter, in its passage from the kidney to the bladder, occasioning a great accumulation of urine in the ureter, &. — distension of the ureter above the lodgement of the stone till the collumn of urine and the distention be so great as to force it down into the bladder. —

This causes a goodeal of pain, but when it is washed down the ureter into the bladder. the patient is much easier. — The stone is sometimes lodged between the coats of the bladder, producing great

pain the stchings are violent, When the patient com=
=plains of burnings and pain in the bladder, we have
then reason to believe the stone has found its way
into it, The patient should drink plentifully of
barley wates, and endeavour to pass the stone by
urine. He should attempt this frequently, if
it does not succeed the pain becomes greater. —
The pain is worse after the patient has voided urine.
When a stone exists in the bladder, the patient feels
an itching ~~in the bladder~~ sensation at the glans pe=
=nis, accompanied with pain and heat in the blad=
=der, at the place where the stone is lodged. The
stream of urine is suddenly stopped when at som=
=etimes, occasioning great pain, by the falling
of the stone on the orrifice of the urithra, and at
other times flows in a full stream. An uneasey —
sensation is felt all a long the urethra between
the perinium and glans penis, as tho something
was lodged in the passage occasioning the patient to
squeeze and pull it, — causing thereby an elon=
=gation of the penis and prepuce both, Sometimes
it is attended with tenesmus and prolapsus ani.
The urine is pale and often mixed with blood.

The digestion is interupted occasioning flatulency costiveness, weekness, and fever, and if the stone is not soon taken out, death soon must take plac. The These are the generally attending symtoms of stone in the bladder, they do not prove it unequivocally, as the sometimes occur from other causes, as inflammation or ulceration of the neck of the bladder; or ulcers or tumors in the scrotum. A case of a young woman came under my care, with the symtoms above discribed, who was sounded three times, but without finding any stone; after which mercury was prescribed and in about two bleek the patient got well. in this case I suspect there was an ulcer at the neck of the bladder. Hemorohoidal tumor, not unfrequently cause the symtoms. sometimes the stone is incisted, and then the patient experiences no pain, because when he moves about the stone is prevented from falling on the neck of the bladder. When the patient discharges small pieces of matter, We may expect the existance of stone. Mostly the stone can be felt by sounding which is the surest

way of determaining its existance. For this pur=
=pose we are use an instrument of iron called
a sound. Tho the attempt of the surgeon to
feel the stone may sometime be frustrated
by its situation behind, and below the neck
of the bladder, But if the surgeon introduces his
finger into the rectum. and pres that part
of the bladder up, he will be immediately
able to feel the stone. ——————

many different remedies have been employed
for the cure of the stone, but the generally do
no good. Different substances have been tak
=en into the stomach for that purpose. —
and others have been injected into the bladder
ese solvent for it, but all of no use, Strong
alkaline solutions are found to dissolve stone
out of the body, and some have been advised
for the cure of stone. The most usual substa=
=nces taken into the body are aqua nephri=
=tica, alkaline, aqua calcis, uva ursi &c
Medesins have been likewise been advised

to be injected into the bladder to dissolve the stone
our great objections to medecins used as solvents,
is, that they may occasion the coats of the bla=
=dder to slough off, and thereby endanger the life
of the patient. The carbonate of potash has=
been serviceable in some cases. Lime water
is useful sometimes to ease the pain. Lau=
=rel has likewise been given for that purpose.
Bloodletting and opiates are the best remedy
for a fit of the stone also warm bathing, when
these substances that are employed fail, the
operation of lythotomy becomes necessary
for the existance of the patient. Before pro=
=ceeding to the operation in cold weather, we
we should dip the sound in warm water to pre=
=vent contraction of the part.

The patient should be laid on a table or some
convenient place, and the surgeon proceed
to introduce the sound (after oiling it) with
the concave part turned towards the bladder.
If it is not easely introduced in this man=
=ner, turn the convex side to the bladder —
and try a gain. Frequently the sound will

pass till it comes to the membranous part of the urethra and then suddenly stops. no force should be used to gain an entrance. but the sound be forced out of the urethra into the safe parts to avoid the folds in the urethra that stop the sound the instrument is to be turned round with its concave side up, in such a manner, that it shall revolve exactly on its axis. Some surgeons turn the concave side of the sound to the bladder and persist in that particular way for its introduction, whilst others as tenaciously pursue the opposite way. This arises altogether from prejudice, because they have been used to do it always in that way. The way in which the silver catheter is introduced, is so similar to the introduction of the sound, that I shall not take up any more of your time in discribing the mode of introducing of the latter formed when the sound is introduced into the bladder turn it in all directions; if you do not feel the stone pass it up further in the bladder; if it is not yet felt, cause the patient to change

change his situation, frequently when the stone has not eluded the sound, by placing the patient on his hands and knees it has been directly felt, when its existance is farely ascertained the operation may be performed. A bout weeks before the operation the patient should attend to his diet and live low, and a day before the operation should take a dose of castor oil to open his bowels; a bout an hour before the operation a Glister should be administered. Some sergeons advise to empty the bladder before the operation; but I should advise to let it be moderately distened with urine which will render the operation easy. ——

The instrument necessary for the operation, are first, a table of about the ordinary height; I generally use a common dining table; what ever table is used, it should be narrow, so that the assistants can have an opertunity of holding without bending a blanket or something of the kind is to

be spread over the table and pillows applied to support the patients head, it will be necessary to be provided with warm water, and likewise some sweet oil, also ligatures, and tenaculum, for taking up any arteries that may be cut.— Ligatures must be provided to tie the hands to the feet, to prevent the patient kicking; these answer very well of worsted bindings. next a grooved director, a scalpel, a sharp pointed bistouri, a gorget to divide the sides of the neck of the bladder. The point of the gorget should be so as to play easily which is of great consequence. In the groove of the staff, which is to be very clean of blood or unctuous matter, and very smooth clear. Forceps, these are of different shapes and sizes. I would prefer the smaller ones, to those that have large ends for grasping the stone. In those all faucepts are not strong enough for extracting the stone, a common scoop, such as

a coucheures use for extracting the childs head may be introduced by the the side of them, and assist in drawing out the stone. Sometimes the stone is not sufficiently strong to bear the extraction, but breaks in peices, then the small forceps are much better best, — If any peices are bro=ken off, it may readily be seen by examin=ing the part extracted, a syringe has been found of service to clean the bladder of small peices of stone, by introducing it thro the wound, and injecting warm water into the bladder, which will wash away every small peice that remains. It is necessary for the edge of the gorget to be very sharp at the back, else some force must be used to penetrate the bladder, by which the gorget may go too far and wound fundas of the blad=der. An accident of this kind actually happened with Bloomfield. The reason why this part of the instrument is mostly dull. is be=cause the cutler cannot get at it to sharpen it on account of the back: To remedy this inconvenience I have got some made so

so that the sides can be taken off, in this manner they can be sharpened at the point as easily as at any other part; the sides are fastened on by means of a screw. The old form of the gorget used to be but one edged. i. e. having one edge for cutting and the other blunt; but they are now used with two cutting edges, so that both sides of the neck of the bladder may be divided: The edges used also to run from the beak in a curved or circular manner; but I prefer them straight, forming an acute angle.

I shall now shew the mode of operating. after the director is introduced, the patient is desired to take hold of the out side of his heels. When the surgeon passes the ligatures, which were previously fastned to the wrists, round the feet, each hand to its respective on each side. Two assistants stand by the side of the table. and each takes on knee of the patient in his axilla, and grasps the foot with his hands. a nother assistant takes hold of the handle

of the director and draws it to the right side.
The surgeon then holds away the scrotum
from the peritoneum, in which he makes an-
incision from above downwards, between
the anus and ischium on the left side. Having cut
thro' the skin and allular substance feel for the
staff. Then take a sharp pointed bistouri,-
placing your fingers at the sphincter ani, to
prevent your cutting it, and cut towards your
finger till you find the groove. Then with the
bistouri, rest the back on your finger, and put
the point in the groove of the staff laying it bare,
The surgeon then places the back of the gorget
in the groove of the staff, taking hold of the-
handle of the staff with his left hand; and br-
=inging it to a right angle with his body.
an assistant then takes hold of the scrotum
and draws it up: The surgeon then bares do-
=wn the handle of the gorget and pushes it
into the bladder. The urine that is in the-
bladder now escapes, When the gorget has
got into the bladder, the staff is to be with-
=drawn;

before the gorget is withdrawn introduce the fou=
=ceps, then take away the gorget, drawing it
carefully so as not to make a new inscision.
The handle of the forceps should be turned up=
=wards as gravity would cause the stone to fall
to the lower part of the bladder; The forceps sh=
=ould never be held in one hand, but one han=
=dle in each hand.; When you have got hold
of the stone, introduce by the side of the forceps
to loosen it in any part that may be entan=
=gled, and to place the stone in the best and
easiest way for its escape from the bladder.
When the stone is extracted; examine if any
more be left in the bladder, or if any peices
are broken off the stone taken out, If any ves=
=sels be cut, on the common means for se=
=curing them. The patient is now untied, his kn=
=ees put close together, and laid on his side
in bed.

Not unfrequently as you are about to push
in children, they are saized with a straining
fit. The diaphragm and abdominal mus=
=cles

press the viscera of the abdomen on the fundus of the bladder, and force it on the neck of the bladder, if you push in the gorget during this straining, you will very certainly cut the fun=dus of the bladder. If it comes on after you have divided the neck, and the urine evacu=ated, it will be safest to withdraw the gorget.

The operations of Lithotomy is much sim=pler in females, Some have advised to intro=duce the staff into the bladder, and then with a bistouri making an opening into it from the vagina, and extract the stone from the bladder thro the vagina, Sometimes this mode of operating answers very well. I myself have performed the operation in this manner, and the wound healed very well. I however prefer the gorget.

Lecture 23rd.

Amputations.

I told you when treating of wounds, that when the parts were so infused, that they could not recover, amputation became necessary. If this is deffered till after inflammation has supervened, we must then wait till it has subsided. Amputations likewise becomes necessary from tumors, as white swellings of the joints. Diseases of the joints often produce hectic fever, and the patient becomes much debilitated by night sweats, loses appetite &c., and amputation is necessary for his restoration. If the patients stomacks be good never fear to operate; tho he be much emaciated. The antient surgeons advised amputations when mortification had taken place, and whilst it was still progressing. This practice should always be avoided, because if the limb be taken off in the progressive state of mortification, the stump

will be attached, and the patient obliged to
a nother operation; but if the surgeon wait
till the mortification has stopped, and the
dead part separated the bone only will remain
to be cut which will give but little pain to the
patient. —

Another cause of amputation, is large tumors
causing the absorption of bones or joints, —
also fungus hoematodes. — I shall now men=
=tion the manner of operating. sometimes —
we have to amputate the fingers: If the disease
is at or near the ends of the fingers, it will an=
=swer very well to take it off at the first or
second joint. so that a portion of skin may be
be left to cover the end of the bone. This done
the edges of the skin are to be brout in contact,
and kept in this situation by adhesive plas=
=ter, and secured by a roller, which, as the ar=
=teries are so small, will be sufficient to
prevent any hemorrhage. Sometime the fin=
=ger has to be taken off at its articulation with
the metacar pal bones; all that is necessary
then, is to cut down between the fingers till

you come to the joint, then after the finger is
taken off, and the vessels secured, bring the edges
=ges of the skin together, and apply adhesive
plaster. A roller is then to be passed round the
hand. Sometimes we have to take the meta=
=carpal bone away. This may be done either
at its articulation with the carpas, or sawed off
at any place wen it is necessary with a me=
=tacarpal saw. First separating it from the
other parts by making an incission directly
over the middle of the bone, from the fingers
down to the place where you would take it
off. If any vessels are cut take them up
with a tenaculam. Bring the ends together
and secure with adhesive plaster and apply
a bandage round the hand.

Aputation of the Leg.

And first of the things necessary to perform
the operation. A compress bandage, a
tourniquets, — these are to be applied if the
leg is amputated, just above the knee but
if the thigh is taken off, they are to be appl=
=ied

near the groin. —— A straight knife this should be very sharp, else it will only mangle some parts and cut others; for it is dull, the skin will be thrown in folds before it, and the sur=face of the divided edge will be very uneven and ragged. A scalpel will be wanted, — A catlin, this is a knife with two cutting=edges — A retractor, this is a piece of lea=ther with thrutails, the middle piece is paped thro between the tibia and fibula to hold back the soft parts while the bone is taken off, a saw for cutting bone. It is necessary that the saw be not wide, else by binding on the kerf it will be apt to break off the bone before it is cut thro; lea=ving portions to be broken off with the nip=pers. — A pair of nippers to break off any speculae that may remain — A tenaculum. Besides these it is necessary to have some warm water, sponges, needles, ligatures, lint, adhesive plaster, cerate, tow, and two bandges of linnen called longets.

In proceeding to the operation, the patient

must be laid on the table covered with a blanket or firm matress, the compress is first laid over the artery, and the torniquet applied on it to stop the circulation - about an hour before the operation, the patient should take a dose of laudanum, not so much for easing the pain as to give him fortitude, and fit him to undergo the operation, because some patients cannot stand it. I have seen one patient faint three times under the same operation. Screw the torniquet till the circulation is stopped. In order to ascertain when this is effected. I commonly applying my finger on the anterior tibial artery, while the assistant screws the torniquet, by which I can tell as soon as it is stopped. When the injury is low down near the foot, the surgeon has his choise where to operate. If it is a person of high life who wants to have the appearance of two legs, and go in company, and who can afford to get an artificial legs it may do to operate as far below the knee as convenient, but if it

is a poor man who has to undergo hardships, he can but ill afford an artificial leg, and should have the operation performed just below the knee. He can then bend his knee and bear his weight on the part naturally formed without much inconvenience from the projecting stump, which would be great=ly in the way were the leg taken off at the Ankle - This inconvenience arising from a-stump projecting so far behind, is so gre=at, that a person subjected to it, underwent a second operation to get rid of it. ——

In proceeding to operate let an assistant draw up the skin first, then take a straight-knife and make an incision round the the leg. It is not necessary that this sho=uld be all at one stroke, as some surgeon advise, I have seen the surgeon place him=self in such a posture, to make the inci=sion round at one stroke, that I was really afraid that he would cut a piece of his own nose off, which might have been done by the least slip, as the floor was

sanded to catch the blood - Some surgeons adv=
=vise to make the incision straight thro
to the bone; but I would advise to make it
obliquily, so that the flesh on the back
part of the leg may be brot in contact with
the skin on the fore part, and compleat=
=ly cover the end of the bone. After you
have cut round thro the skin and cellular
membrane, descat the integuments from
the muscles and turn them back; if this
cannot be done they must be drawn back,
and then divided the muscles down to the bone.
take the catline and divide the interosseous
ligament and muscles, and pass the mid=
=dle strip of the retractor between the bones to
draw back the soft parts - Then saw off the
bones some advise to hold the saw so as
to cut both bones at once; This is after
inconvenient. I mostly saw the fibli=
=la first and then the tibia. It is ne=
=cessary to make long strokes with the saw,
else the kerf gets clogged - After the leg is off
wash the surface with warm water, and

thin search for the principle arteries, which
must be drawn out with the tenaculum and
secured by ligature — after all the arteries that
can be seen are taken up, the tourniquet
should be loosened to see if any of the flesh
arteries bleed — warm water should be poured
on the part, & the patient should have a little
wine and water to drink, to excite the circu-
-lation, and expose all the bleeding arteirs.
When they are all secured, wash away all the
clots of blood and draw down the integument
over the end of the bone, and wrap a bandage
round the stump, to prevent the contraction
of the vessels — Secure the edges of the wound
in contact by means of adhesive plaster.
Before these are applied the ligatures are to
be brot out at the corner of the wound — a
peace of lint spread with cerate is to be ap-
-plied between the edges to prevent their
union by the first inshaction, for if the
unite before the ligatures come away, they
will prevent the same from beeming thrown
out, and an abscess will be formed caus-
-sing

great pain to the patient, after the adhesive pl=
=aster apply lint spread with simple cerate then
the pligot of tow, then the longet in a crucial form
and secure them by a roller. The tourniquet
should be left on, the loose, after the leg is se=
=cured, to be in readiness if hemorhage should
occur. The patient is now put to bed with the
stump rested on a soft pillow. ——

I now shew the mode of the.

Amputation of the Thigh.

The instruments are much the same only
the catlin is not wanted nor need the retrac=
=tor be slit in two places but only in the
middle. This operation is to be made as low
down as possible, but so that none of the dis=
=eased parts are cut; after making an incis=
=ion thro the skin, dissect the integuments
as in the other case, and divide muscles do=
=wn to the bone: This done apply the retrac=
=tor and saw the bone, after washing it
take up all the large arteries and large veins
in old people the arteries are sometimes
ossified, I then pass a needle round some

portion of the muscles, including them in the ligature, the better to prevent hemorrhage. All the other processes are like what I have discribed in the leg.

Bronchotomy.

Sometimes a swelling or abstruction of the aspira arteria takes place to such a degree that an operation becomes necessary. This operation is performed between the thyroid and cricoid cartelages. First make a longitudinal inscission down to the cartileges; and then puncture the trachea with the point of a knife, and introduce a silver cannula, which is to be secured in its situation by means of tape passed thro' the holes in the base of the cannula, and round the neck of the patient. This is a very easy and safe operation no vessels run in the way to cause homorhage.

Ascites.

This is a collection of water in the cavity of the abdonum, for which it is necessary to perform an operation called paracentesis. The operation is generally performed at the left side a bout half way between the superior anterior spinous process, and the navil, The left side is prefered for the purpose of avoiding the liver. The celebrated Mr. Cline in performing this operation wounded the epigastaic artery, and the patient was suffered to die from hemorrhage. I say suffered - because he ought to have cat down to the bleeding vefsels and secured it. This made him suspicious of operating in the side. He therefore proposed to make an inscision about half way between the pubis and navel. Notwithstanding the tenderious part that is perforated, however contrary it may seem to theory, heals up as well as any other part. The urine should always first be evacuated. This operation is generally performed with

a trocar, the stilette of which some surgeons have made flat. This must be very incon=venient, and require a greatdeal of force to push the cannula into the belly. Others have the stilette triangular. It is of the greatest consequence to ascertain whether the tumor be really a collection of water or not; if it contains water it may generally be told by the fluctuation. An acheese who had been seve=ral times tapped for ascites, believed herself afflicted with a return of the complaint, and applied to a surgeon for relief. He without ex=amining sufficiently, plunged in the trocar in the same place where it had been formerly, but to his great astonishment no water fol=lowed, In about three days she died, and examination traced the wound into the uterus, and lodged in the hips of the foetus. I generad=ly perform this with a common lancet, which answers very well, and instead of a trocar introduce a large female catheter, the round end of which will be more easy and less liable to be stopped by the intes=

=tines

coming in contact with the orifice of which are in the sides of the catheter, but in the end of the cannula, and will allow the water to flow out without interuption. The patient sometimes, while the water is flowing, or just after it is evacuated, faints. He should have some wine and water given him, and a degree of pressure made on the abdomen, to keep up some of the pressure that existed before, from the distention.

After the water is all evacuated, withdraw the withdraw the catheter, and bring the edges of the wound in contact together by adhesive plaster. and apply a compress to the orifice, this done, pass a roller round the belly for its support.

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Lecture 21st.

Aneurism

An aneurism is a morbid dilatation of the heart, or some part of the arterial system. Aneurisms are divided into true and false. The true are such as are already described, and are attended with no wound or division of the cutis, The false, are such as occur from accident, in=dependent of any disease of the artery arteries. I shall confine myself principally to true aneurisms, — There is a greater tendency to aneu=rism in one part than in a nother. — They may occur in the aorta and in different parts of the body at the same time, but are mostly con=fined to the arterial system only, which yiel=ding to the momentum of the blood, grows week=er and weeker, and at last bursts. —

The proximate cause of aneurism is a dispro=portion between the momentum of the blood, and the power of the artery. of the remote

causes of aneurism, we know but little — Excessive drinking of strong ardent liquors, is said to be one cause. It is said by some that voilent st=rains lay the foundation for aneurism. I have twice seen fals aneurism in the ham from con=tusion. It has likewise been said that aneurism has sometimes been occasioned by bleeding, in consequence of the lancet passing thro the vain and dividing or injuring the outer coats of the artery, leaving it too weak to resist the force of the heart, — To ascertain this, Mr Hunter laid bare the carotid artery of a dog he then deserted a way the coats of the arte=ry, one after another till he came to the internal polished coat the wound was then tied up, and the dog left to himself. About three weeks after this, the dog was killed, the artery was examined and found to be of the natural size; not having dilated in any wise; and the coats were consolidated to the sides of the artery and got well. The circumstances which lays the foundation for aneurism, is, a diseased state of the artery, which renders it

too weak to resist the impetus of the heart. an aneurism, is not simpley a dilatation of the ar=
=tery, but there is likewise a roughening of the internal coat, which at times becomes oss=
=ified - Aneurisms occur less frequently, it is said in women then in men. I have, how=
=ever seen several cases of aneurism in women. The occur most frequently in young people.
It is of the greatest consequence to distinguish between aneurism and tumors of the any other kind; tho the differance is obscure, and often not to be perceived, especially in old aneurisms. In resent aneurisms. the pulsation can always be felt by pressure; but after some time when the swelling and tenseness are much increa=
=sed, polling the parts on the stretch, and the coa=
=gula is formed, the puls becomes obstructed - because the stroke of the heart has to be con=
=tinued thro the coagula to the finger touch=
=ing. In all resent cases we can remove the blood contained in the swelling, by pressure made for some time over the part; tho it will soon return when the pressure is taken

off, whereas a tumor remains immovable, a tumor may form on an artery, or be so situ=ated as to partake of the pulsations, and in that respect resemble an aneurism, but we can place the fingers behind it so as to pull it up off the artery, and the pulsation ceases. Even when we cannot raise the tumor from off the artery we are still enabled to distinguish it from an aneurism, by the particular pulsa=tion, for when a tumor is situated on an artery we are sensible of the whole body moving. When the dilatation takes place in the thorax it is known by a palpitation of the heart and difficulty of breathing. When the dila=tation of an artery has commenced, the pro=gress is much slower than we would suppose, because the impetus of the blood, as the artery dilates, is divided over a larger surface. It does not advance all at once, but increases gradually, coagula forming as the sac distends. The aneurismal bag as it inlarges, contracts adhe=sions to the parts around it, and the internal parts wear away to a great size. The dilatation of

the artery commonly takes place on that side which is most remote from the heart, or on that which the impetus of the heart is the greatest, tho sometimes they are equally dilated. The pressure they occasion frequently causes the absorption of the coagula, or of, perhaps a portion of the surrounding parts, I have seen a portion of the ribs absorbed by it. In this manner it goes on till it arrives at the skin, when it bursts, and the patient dies by a sudden gush of blood. In an aneurismal sack there will be formed a number of coagula, or lamina. The general indication in the treatment of aneurism is, to lessen the quantity of blood in the trunks of the arteries, Rest and low diet are always necessary. Bandages have been likewise applied, and are said to have performed cures. I shall speak chiefly of popliteal aneurism. At first there is no pain, but only a pulsating tumor, which enlarges till it produces pain from pressing the large nerves on the ancle. The surest method of curing aneurism is, to tie up the artery. The mode of performing the operation some years

ago was to make an incision into the aneu=
=rismal sac, while the tourniquet was screwed
tight on the upper part of the thigh, and after
discharging the blood to tie up the artery just
above the sac. But this is frequently im=
=safe on account of the diseased ~~part~~ state
of the artery, which would be likely to burst
at the place where it was tied. To remedy
this Mr. Hunter proposed to take up the artery
about half way between the knee, and anterior
spinus process of the ileum, also that he might
avoid the hemorrhage which frequently occur=
=ed from the diseased and ossified state of the
artery, which would not allow the sides to
unite. The limb will be nourished by the
anastomosing branches. It however sometimes
happens that these are not sufficient for the
support of the limb, and mortification ensues.
This I suppose is not owing to any want of
sufficiency in the size or number of the anas=
=tomosing branches, but to the tenseness or pr=
=essure of the swelling, obstructing the cir=
=culation. I saw one case of this kind, but

I suppose that was owcing to the tumor pre=
=venting the circulation in the anastomosing bra=
=nches. In proceeding to perform this operation,
first have a tournaquet fixed on the upper part
of the thigh, but not tight, allowing the artery
to pulsate, then making the incision four
inches in length, longitudinally in the course
of the fibers down to the sartorious muscle,
and desect along the lower edge of it. It is
necessary to pay particular attention to this
for if you get aboon the sartorius muscle, you
may cut down to the bone, and not find the ar=
tery. after you have discated thro the skin and
cellular substance, feel with your finger for
the pulsation of the artery. It is best to use
the handle of the knife to expose the artery.
as there is great number of anastomosing=
branches which would probably be wounded by
the sharp edge of the scalpel. There is a thin
facia before you come to the artery. thro wh=
=ich you must scratch with the point of the
knife, a little to one side of the artery, to avoid
wounding it. After the artery is brot into view,

it may be taken up either by means of a silver bod=
=kin, or as Mr. Abernethy advises, by paping a couph
of ligatures round it at a bout half an inch dis=
=tant from each other, and then seperate the ar=
=tery between the ligatures by which means he
says, the ligatures come away much sooner.

The artery is divided to take off the tension. —
I have seen the ends receed ¾ of an inch from
each other when divided.

In which ever way it is performed. The ends
of the ligatures are to be brot outside of the wo=
=und, and a pledget applied so as to press the bot=
=tom of the wound close together, that the out=
=side of it may not heal too soon, and there=
=by form an abscess, I have seen an abscess
from this cause. extend from the knee to the
anterior spinous proces of the ilium. The ane=
=urism at tumor after, this treatment ~~the~~ most
frequently disappears. This is sometimes,
however not the case, and the tumor goes on
to supperation. If the tumor, after his has
supparation, does not open of itself, by an
ulceration proces, it should be opened by

an incision. When this is neglected, very serious consequencesses, sometimes occur. I once new it to produce an abscess of the knee joint, and the patient died. When the artery bursts and allows the blood to flow in the cellular texture, the pulsation may be perceived at first; but the blood stagnating there. some coagulates, and the swelling and tension prevent any pulsation being felt, and then it is imposable to say weather it be an abscess or an aneurism. When this occurs we should apply tourniment and make an puncture into it; if it be an absc, the matter will be allowed to flow out; if it be an aneurism it must be tied up. When the tension is great, part of the coagula should be scoped out at the puncture, to relieve the tension. In 8, or 10 days the tumor will have suppurated, and the extravasated blood will have come away.

False Aneurism.

There are two kind both occurring from wounds in the artery. one occurs from bleed=ing in consaquanu of the lancet — puncture=ing

thro the vain into the cavity of the artery, and letting the blood flow from the artery into the vain; this forms what is called varicos aneurism. It may be told by a thrilling sensation which is easily distinguishable. a hissing noise may be hard by applying the ear near the orifice. Sometimes the two orifices do not exactly correspond with each other, and the blood instead of flowing into the vains, escapes into the cellular membrane, and from a tense aneurismal pouch, communicating with both the artery and vain, causing great pain to the patient, and an operation is not performed, the skin becomes tense and bursts or sloughs away, bleeding perfusely, and exposing the patient to great danger.

The varicos aneurism is free from danger, and therefore no operation should be performed. The only inconvenience arising from it is, a little deformity, caused by the dilatation of the vains of the place. But when the blood escapes into the cellular substance, an operation becomes necessary. The artery and vain should both be secured above and below the sac. — The varicos aneurism do not

require on operation in general, yet some of their modifications do.

Lecture 25th

Fistula in Ano.

This disease a carvenous ulcer situated in the vicinity of the anus, It frequently consists of two or more or more cells, and is caused by inflammation, If the parts are greatly inflamed, and violent tumefaction take place, it produces disury & bearing down paines, and not unfrequently occasions suppresion of urine. When it arrives at so great a height it generally terminates in suppuration, forming an abscess, and making an opening either externally only, it is called incompleate fistula. If it communicate both externally and internally, it is called compleat: but if it communicate with the rectum only, it is called blind or occult fistula. To examine well the state of the parts the patient should lean over a table, and the surgeon having his

finger well oiled, should introduce it into the rectum and insert a probe, ~~the fistula~~ into the abscess, if he can feel the point of the probe, the fistula is complete, but if it be incomplete he will be unable to feel the probe, sometimes the abscess is small, resembling a bile & is easily cured. Sometimes the side of the rectum is separated and detached from the buttocks, to a very great extent rising even to the brim of the pelvis.

The causes that occation these abscesses are such as occation inflammation in any other part of the body. We should examine very carefully in all cases of pain in the region of the anus to discover whether it originate from pelvis, if not, so that remedies should be used to prevent suppuration. When we are consulted by a patient concerning pain situated in the region of the anus we should, however disagreeable it be to the patient or ourselves, always examine into the real nature of the complaint. When inflammation and swelling are formed, our first endeavour should be to prevent suppuration, — blood should be drawn

according to the nature of the case, and the constitution of the patient, purging, leaching, bread and milk poultices &c. These remedies are in genal sufficient to remove strangury, when not, the warm bath should be tried.

Sometimes these remides fail, and the tumor increases to such a degree size, as to occasion a total suppression of urine; a catheter should then be introduced for the relief of the patient, which may be left in a considerable length of time without any bad consequences resulting from it. The catheter should be made of gumelastic, which can adapt itself to the shape of the part, and which will be worn with much more ease than a silver one. Sometimes inflammation comes on in the buttock with disposition to gangrene. On this subject I would advise you to read Pott. Tho' I would advise you from the success I have had in the use of blisters; in such cases, to apply them in similar circumstances. If the surgeon is called in early, he may generally resolve the inflammation, but unfortunately we seldom see these cases till suppuration

has taken place, when an operation is neces=
=ary for the cure. In all cases where there is a
collection of matter, we should make an opening
in the most prominent part, and not wait
for it to open naturally. In all cases we should
enjoin the antiphlogistic regimen till inflamm=
=ation subsides. I shall proceed to mention
the circumstances which renders it difficult to
perform a cure without a surgical operation
First. where the fistula is complete, the forma=
=tion of pus keeps its sides distended and prevents
its healing, If the orifice is small, so that
the matter cannot readily flow out, It collects
in the cavity and the granulations cannot
come in contact.

2nd The suppurating cavity is prevented
from healing by the external orifice closing
too soon, and here the patient thinks himself
geting well, but his hopes are soon disapoint=
=ed, for the matter has either to force its way out
again or to make a new opening

3d When the fistula is complete pus pass
into the opening and are pefsed out at the exter=
=nal,

orrifice when we go to stool. When occult the matter makes its way into the rectum and will be discharged in that way; but it will frequently be obstructed by the fæces, tho' in most cases the opening goes obliquely downwards, and when the patient goes to stool, the fæces will close up the orrifice, but I have seen cases when the orrifice opened upwards into the rectum, and wherever fæces were voided would get into the abscess and distend it very much, causing great distress to the patient.

4th When nature is unequal to a cure without the assistance of a surgeon. — As 1st. Where the cavity is on one side of the sphincter, and the patient goes to stool, the contraction of the vessels will draw the detached side from its natural situation, destroying all the newly formed granulations and preventing its cure. 2d. another obstruction to the cure is where the patient goes to stool, the gut is some what protruded, and any adhesions that may have taken place in its contracted state are destroyed. It is to this cause that the small portion of blood is coming, which appears after stool.

5th — When, owing to some cause or other, the healing of the fistula has been prevented for somtime, the parts become callus, as was before explained, and such callosity happens —

6th — The practice of introducing substances into the abscess as stoping it full of lint, called by some surgeons, dressing to the bottom —

7th — When the extent of the fistula is arrived a considerable way into the pelvis, and even to the upper part of the brim, accompanied caries nature seldom effects a cure, and even the art of the best surgeons is often foiled. —

8th — The general health of the patient, this should be attended to, as it will assist greatly in the cure —

The Operation for a Fistula in Ano —

This consists in dividing the splinter and detached gut: because, 1st — being when eat prevents its acting so as to injure the granulations, and 2nd — forces can press regularly out without protruding the rectum. —

For information of the particular manner of performing this ~~operation~~ operation, I would advise

you to read Potts. My object has been to shew the prin=
=ipals on which the healing is effected. Also I
shall makes some remarkes on the mode of opera=
=tions. When the fistula is complete, the patient
is to lean over a table, then the surgeon after oil=
=ing his finger, is to introduce it into the anus,
then introduce a bistoure thro the fistulous cavity
till it comes in contact with the finger, draw
away both fingers and bistoure together, and the
bistouri divides all the parts between the upper
opening, at which it was inserted into the
rectum, and the external end of the rectum.
It divides the sphincter and rectum from its upper
communication to its extremity, In the intro=
=duction of the bistouri, the patient ~~would~~ will
feel considerable pain from the edge instrument
cutting as it is inserted. To remedy this, I have
a silver cap that you on the point of the bistouri
and extend along on one to the handle, being
a little wider than the blade, which secures
the ~~blade~~ edge. When the bistouri is introduced
by pushing a little knob on at the end of the
cap, it falls off, leaving the edge exposed.

A nother method when a silver cap is not at hand, is to place a piece of waxed linnen on the edge, this should be long enough to reach to the edge of the handle, so the where the bistoury is introduced we can draw away the linnen and divide the parts. This mode answers extremly well. sometimes the opening into the rectum is so low down that we can pass a director from the abscess into the rectum & out at the anus; in this the parts may be divided by a scalpel: but when the fistula is so high up, that to divide the parts with a bistouri might endanger a hemorrhage, we should pass a ligature thro it bring it out at the anus and tie it, tho not so tight as to occasion great pain. This will avoid hemorrhage and the part within the ligature will be divided by ulceration absorption. The wound occationed by the ligature will heal nearly as fast as the ulceration goes on, so that by the times the ligature has cut thro the wound will be nearly healed up tho sometimes it does not heal so fast ——

I shall now make a few remarks on the

Hare Lip.

Which derived its name from its resemblance to the lip of that animal. It mostly takes place in the upper lip, and is but one slit, tho sometimes the lip is divided in two places. These are most frequently born with, tho they sometimes happen from accident. When the occur at birth, the sutures uniting the maxillary bones together, is at times, not well consolidated, owing to the want of the gentle pressure of the lip. In such cases the lip should be united immediately. In proceeding to do this we should have a pair of sharp strong Scipers which are the most convenient, and cut a small peice off from each lip, taking care to cut out the upper angle or else the lip, however well united below, will not heal above. The peice cut out resembles somewhat the letter V after this is done, the edges are drawn equelly together and secured with two silver pins by the twisted Suture, always taking off the points of the pins after they are introduced to avoid hurting the patient, this is especially necesary in children. The pins should be left

in a bout four days, when they may be withdrawn.
This can be done by taking hold of the end with a
pair of nippers, as the pins will hold pretty
fast. Lay your finger on the thread, when you
draw the threads to prevent pulling it off.—
The thread may be left for one or two days longer,
by which time it will be perfectly well.—
Thread will be a glutinated to the parts by the
mucous of the nose.

Lecture 26th.

Strictures in the Urethra

By this term, strictures, is meant the diminution of any canal at a particular part. When they occur in the urethra, the most commonly happen at the bulb, tho they sometimes take place at the middle of the urethra, and sometimes beyond the bulb at the membranous part of the urethra, tho, rarely. They are of two kinds, spasmodic and permanant, tho then two kinds we not unfrequently combined. The first effect of a stricture in the urethra, is to decrease or lessen the flow of urine, and oftentimes the patient does not suspect any disease, untill in the voiding of urine, he finds it to pass drop by drop - He will now frequent trials to make water, passing a little at a time and this not without considerable straining. A glut in general attends its, owing to the straining and irritation there is in passing urine.

The parts situated between the bladder and ori=
=ifice; become very much dilated, and the oth=
=er parts diminished, resembling in its effect
a string tied round the penis.

The stricture most commonly runs regularly by
round the urethra, but not always, for it is som=
=times found at one side only

When ever spasms supervain in such a stricture
the passage is completely closed.

The causes are cold weather, cold feet, and the
intemperate use of strong drink

I had a patient in whom it was caused by
evitus, from too long retention of

The great difficulty there is in ascertaining the
causes, is the reason that the suppression is
generally not treated with success, for the
stricture when not

Venereal disease is
sometimes the cause of it

Treatment.

The permanent stricture may be dilated
in common by a bougie. much depends

upon the preparation of bougies. and upon their make — In general use waxed linnen. Pieces of fine linnen cut to a point, and dipped in pure wax, and rolled smoothly up, make the best bougies: the point must be small, but the body sufficiently stiff to bare the force nesesary for introducing it. The bougie may be introduced as far as it will enter, and left for sometime with its point in contact with the stricture, till the irritation has subsided, and then press it gently forward; by which means the stricture will be frequently overcome ——
Commonly when the bougie is introduced the patient will faint and a cold sweat will break out over him. This seldom happens after the third introduction of the bougie. When the stricture is small it may then be dilated. At times cases occur, in which the structured part is so close as not to admit the point of the bougie. in such cases we sometimes succeed by letting the patient grasp a bougie down the stricture, and press

the point of it on the stricture, for the space of an hour or two every day. Sometimes the canal is thrown to one side, making the passage irregular; When this occurs, the point of the bougie is to be bent to one side, and then introduced.

Sometimes the pressure and irritation of the urine accumulate in the parts, occations ulceration of some of the parts behind the stricture, forming an artificial opening called a fistula in perineo. In such cases there are two modes of relief, either by caustic or by the lancet. Caustic was first used by Mr. Hunter, and afterwards by Mr. Home. I have used it myself, in several cases with very good effect. The caustic is rolled up in the end of the bougie, and tied by a very fine thread; the end of the caustic may project a little. To prevent the caustic burning the canal before it gets to the stricture, a small cap of waxed linnen, secured to a fine thread, and fixed to the end of it, answers very well. When the bougie is passed

down the stricture, the cap may be withdrawn by means of the thread.

When the stricture is at the bulb of the urethra, or before it, it may be divided by a lancet defended by a silver canula. The distention of the urethra behind the stricture, makes it almost impossible to divide any other than the strictured part. — When the canula is introduced to the stricture, the lancet may be pushed thro it and it divided, but the circumstance of the curvation of the urethra makes it difficult to divide it from the back, and the curved canula answers very well in some such cases. — —

When the stricture is dilated, a bougie or catheter should be introduced and kept in for several days; When if there be a fistula in perino, it will heal up in a few days. In spasmodic strictures to treat it by caustic is hurtful, the warm bath, or a small piece of tobacco; or the end of a bougie introduced, to be in contact with the stricture will frequently relieve; or an anodine glyster, venesection

liquid laudanum, or emetics have proved servi-
=ceable. I shall now say a few words on.-

Cancrous Breast.

And the mode of extracting it. When the tumors
are formed in the breast, if the do not yield to
the antiphlogistic treatment, with the use of mer-
=cury, it is best to extract them early. There
are two methods of extracting them, first by caus-
=tic, and second by the knife. The last method
is the best, as we are able to distinguish better
between the diseased and sound parts. This
may be done by one incision made directe-
=ly over the middle of the breast, if the integum-
=ents are sound, but if ulceration, or even in-
=duration of any part of the skin have taken
place, it will be necessary, to make two incis-
=ions, so that the indurated part may be em-
=braced between them and removed. If the
glands in the axilla are affected by the tumor,
we must continue the incision in the course
of the lymphatics, to the tumified glans in

glands in the exilla, and remove the gland and ini=
=durated lymphatics with the tumor. It often diffi=
=cult to get at the glands from their close situation
in the exilla; but the weight of the tumor if it
be large will draw them down, so that you will be
ennabled to get your finger above them to tie a
ligature round which should always be done
before they are separated, on account of the
many vessels of the part.
When the tumor is taken out, the edges of the wo=
=und are to be brot in contact and secured by ad=
=hesive plaster, that the may unite by the first
intension.

Abscess of the Hip joint.

The first symptom or indication of the dis=
=ease is, the Child, it generaly occurs in
Children about fourteen years of age,
or patient refuses to walk or step. It is most=
=ly attended with pain from the commencement
but this however does not always attend, and
when it is a concomitant, it is often dela=
=cive,

occuring not in the hip; but in the knee: this very frequently deceives the parents, and often the Physician is so deceived as to apply substances to the knee instead of applying them to the hip. — Pains when it is attendant, is not always constant, but comes on at intervals, and continues for an hour or two so and then ceases. It is often worse at night. After the disease has existed for some time, a swelling enlargement of the hip and adjacent soft parts takes places.

At this period touching or pressure of the part give pain. — If the patient stands up, he always, rests on the sound side, bearing no weight on the diseased limb, but bends the knee of the diseased side forward, and the toes only rest on the floor. This disease of the hip joint is often mistaken for a disease of the spine. It may however be distinguished from caries of the spine, by laying the patient on his back on a table; for if only the hip be diseased, you can easily straighten and cure the spine. —

Causes. It frequently comes on without any ap=
=parent cause; but often it occurs from blows on
the hip and from jumping.— After some=
=times, as the disease progressed, we frequently
find the limb considerably shortened: This takes
place in consequence of the bone being
pushed out of the acetabulum by tumors for=
=ming in the socket, and the head of the bone
is drawn upwards by the actions of the muscles
on the dorsum of the ilium. This circumstance
of luxation by means of disease in the joint,
has given rid to the term of spontaneous luxation
In common the luxation is upward and ba=
=kwards, but sometimes it takes place dow=
=nward and forwards, from the force of gra=
=vity and relaxation of the muscles. Soon=
=er or later suppuration takes place, and
the bone is found in a carious state;
suppuration does not however, always take
place, for it has happened that a new
acetabulum has been formed, which wo=
=uld allow of some motion to the limb.
When suppuration has taken place, it

is attended with more or less pain, and the matter which is formed, is discharged by one or more openings. In this state the patient very frequently loses his appitite, he becomes much emaciated, has night sweets, and, hectic fever next ensues. In the progress of the disease the thigh dwindles away, very much, becoming much smaller then natural. In some cases the shortening of the limb does not take place, for the head of the bone becomes diseased as well as the acetabulum, and forms an anchylosis with the socket. Sometimes the socket and head of the bone are wholly removed, and then if you examine, you can pass a probe thro' into the pelvis.

Treatment. Unfortunately, we are not often called in in the forming state of the disease. I say unfortunately, for if we were called in early, the disease might be sometimes counteracted. — When called to a patient with those symptoms, first, bleed, 2. purge every other day for two or

three months.- The best remedies for this pur-
-pose, I have found to be Jalap and cream
of tarter; it should be given to produce four
or five executions daily.- You would suppos
that children could not bear such severe a
regimeny but experience proves that they can
bear it very well.

It allways necessary to prevent all motion.
He should be put upon a vegetable diet,-
after this a warm bath may be used: I think
it is more benificial when impregnated with
muriate of soda, or some nutral salt.
I have used salt brine once or twice a
week- I have mentioned tumefaction
of the hip joint because it is from this
circumstance, that the existance of the
disease is ascertained. The application
of caustic on the hip is frequently advised;
but I have tried them in several cases,
and have found them of no efficasy.
The application of leeches to the part, are
often of service.

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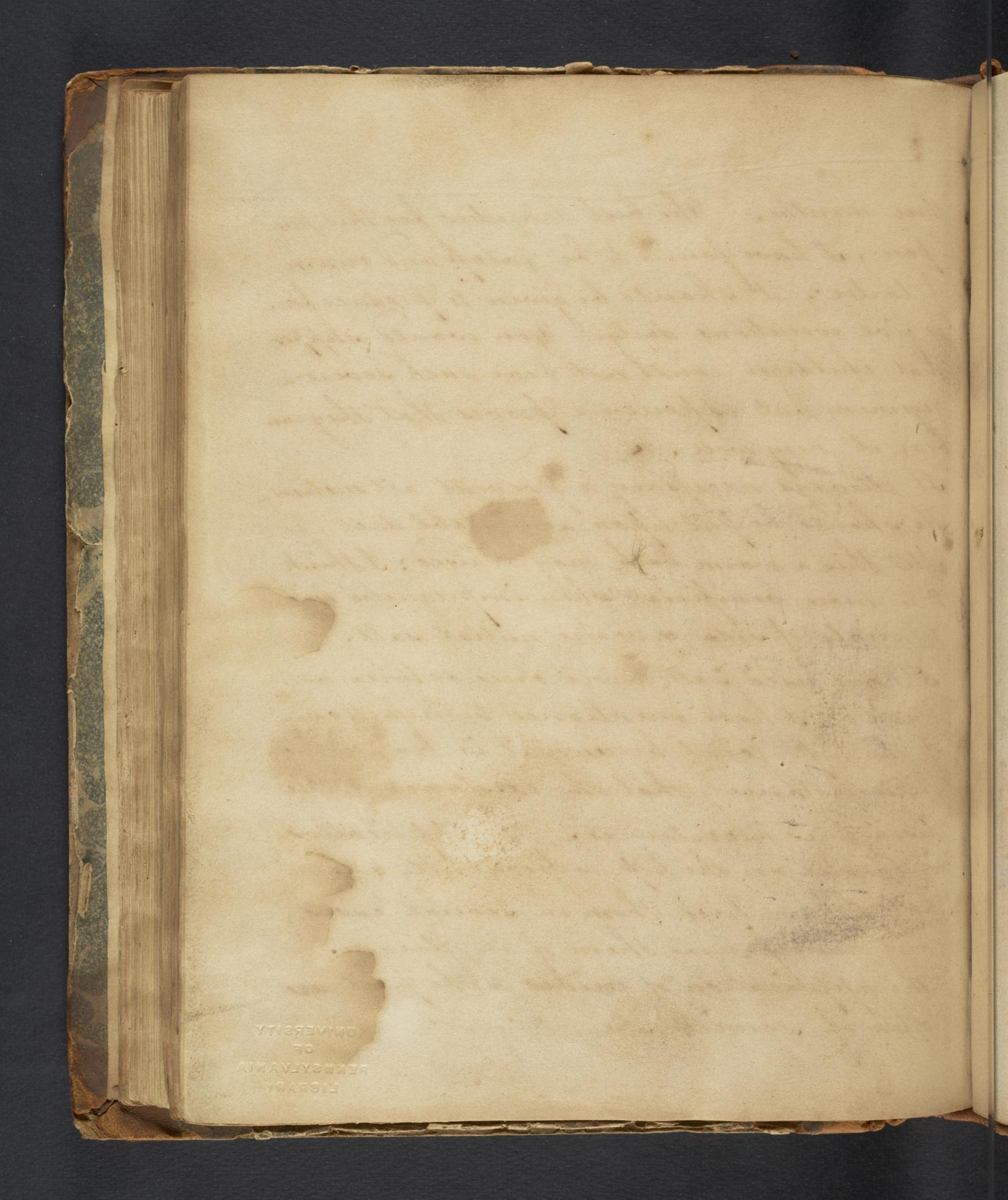

PHYSICKS
LECTURES

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